

# MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,  
Mining, Contracting, Engineering, Building, and General  
Business Interests of the South and Southwest

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## South's Honor Is Above Price

WILL NOT SELL ITS SOUL FOR A BALE OF COTTON.

[From New York Herald, January 24.]

To the Editor of the Herald:

Some months ago I said through the Herald that the South would not sell its soul for a bale of cotton and that it would put its honor above the price of cotton and not measure the value of human life by the price it could get for its cotton. These statements are as true now as then, and Senator Williams in his masterly presentation of the true position of the South has done this section a magnificent service. He voices the true spirit of the real South, the South whose honor is above price, and not that element of the South which puts a money value upon its honor and its relation to world affairs.

Of all the sad illustrations of the spirit of those who would sell the South's soul for money and betray this land, there has never been a sadder one than that of those who measure the relations of this country to world affairs in terms of the price of cotton. Not international justice, not our responsibility to aid those who are fighting the world's battle for civilization and democracy, not the murder of women on the high seas, but cotton, cotton, cotton, is the standard of honor and the basis on which they would disgrace the South in the eyes of all men of integrity and honor through all the world and through all the ages to come. They do not voice the sentiment or the honor of the South.

RICHARD H. EDMONDS.

BALTIMORE, JANUARY 27, 1916



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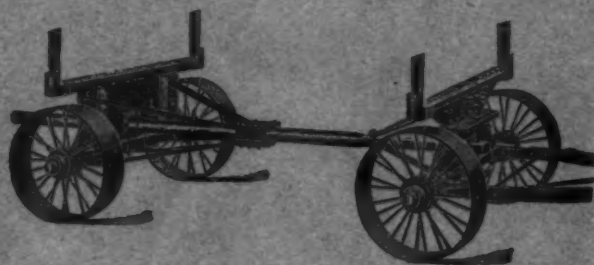
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# MANUFACTURERS RECORD

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Trade-Name Registered in the U. S. Patent Office

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## "THERE SHOULD BE A GREAT MUNITION PLANT IN THE SOUTHERN IRON FIELDS"—ROOSEVELT.

A BRIEF but definite and emphatic declaration in favor of locating a great munition plant in the South was made by Col. Theodore Roosevelt in the course of a speech at Philadelphia, Thursday evening, January 20. Colonel Roosevelt addressed an audience of 6000 at a mass-meeting which closed the National Conference on Naturalization and Americanization. Mr. Alba B. Johnson, president of the Baldwin Locomotive Works, was the presiding officer.

Colonel Roosevelt's address was a rousing appeal for American honor and national defense, and he thrilled the great audience with the impassioned appeal for preparedness which he made. The reference to the importance of properly located munition plants as a commanding feature of preparedness is as follows:

"We should at once begin governmental encouragement and control of our munition plants. To make war on them is to make war on the United States; and those doing so should be treated accordingly.

"The establishment of munition plants further inland should be in every way encouraged as promoted. Pittsburgh is as far east as any plant should by rights be placed.

"There should be a great plant in the Southern iron fields—the iron fields whose development was rendered possible by the wise action of the United States Government in permitting the United States Steel Corporation to secure the Tennessee Coal & Iron Co., action which has since been passed on and approved by the Federal courts.

"These great corporations should be encouraged in everything that makes them efficient."

## FREAKS FROM THE SOUTH.

IT would be humorous, if it were not so tragic, this aggregation of "Cyclones" and other varieties of windjammers and witless humbugs who are seen in the halls of Congress.

At a time when profound wisdom, unswerving patriotism and self-forgetting devotion are needed in the seats of government, State and National, it is little short of a crime for the South, which has so large a part to play in the great constructive work this nation has before it, to earn ridicule and scorn through the conspicuous freakishness of too many of its representatives.

## Responsibility to the Nation That Resources of South Be Adequately Developed.

WRITING to the MANUFACTURERS RECORD in regard to the "Open Letter" published in our issue of January 13, addressed "To the Financiers and Iron and Steel Men of America," Mr. C. W. Howard of the Chattanooga Industrial Board says:

I have just read your splendid "Letter to the Financiers and the Iron and Steel Men of America" in the Manufacturers Record of January 13.

I have written you so many congratulatory letters that I fear to offer another; that I do is your fault.

It would be impossible to force words to accomplish more than is expressed in this letter of a few hundred words. It is inconceivable that men upon whose shoulders rests the weal or woe not only of the stupendous business they head, but of the country itself, should neglect so sane a salvation.

Further disregard of the conditions you speak of—overdevelopment in one section and pitifully undeveloped in another—will automatically suggest one of two facts—a selfish disregard of the country's good or the almost studied disposition to hold down the undeveloped section.

Within the past 10 days I was discussing with a Pennsylvania steel man conditions of the South—how wonderfully favorable they were to the highest development in the steel business. He cited me to three or four disastrous Northern investments in the South.

It just happened that I was familiar with all of them, and I had no hesitation in stating to him that the promoters of these industries would have come to grief had their plants been located on the Mesaba Range, with free coke. The evidence of this fact was in their want of judgment, some instances in the location, in others capital insufficient even for the construction of the plant, to say nothing of inadequate operating capital.

New Jersey, Pennsylvania and Ohio are strewn with wrecks of this nature, yet these States are not charged as we are with failures. As an instance, take the case of a point where something over \$1,500,000 was literally thrown away because of greed for promoting profit and imbecile confidence on the part of the investor; yet for that failure the whole section is damned in certain quarters.

Mr. Howard very accurately states the situation. The South is branded for failures in its iron industry, for which the natural advantages of this section are in no way whatever responsible. The men who have judged this section wrongly by reason of the few failures of iron-making concerns would, on the same basis, never have invested money in the iron industry of Pennsylvania.

Some years ago John Fritz, the great engineer who had so much to do with the creation of the iron and steel industry of Pennsylvania, in discussing the relative conditions of the South and of Pennsylvania, stated to the writer that the failures which had taken place in the South were only similar to the many in the iron industry of Pennsylvania prior to 1860. "Up to that time," said he, "the iron-makers of Pennsylvania were regarded by bankers as the most undesirable borrowers, and all bankers endeavored to avoid lending money to the iron interests of the State, if they could possibly do so, because the industry had been marked by wrecks and failures.

"It was not," said he, "until the war gave to the iron industry of Pennsylvania a tremendous stimulus that it really got it on its feet financially and created the wealth which we now see."

Mr. Fritz gave the history of many of the companies of that State which had one failure after another to their discredit, but which finally, after many turns and twists in new financing, became great wealth creators. And yet it was not until twenty or twenty-five years ago that even the best

of the iron interests of Pennsylvania became established as the greatest wealth-makers of the State.

John W. Gates used to tell the story that when in his early days he was running a concern in Pennsylvania he received an order from Carnegie, Phipps & Co., who offered to pay by note instead of by cash. Gates said he went to his banker and asked him as to whether the note was good or not. The banker replied that it probably was, because everybody had them.

There were times as late as that when some of the biggest companies in Pennsylvania had very hard financial sledding. About that time, or just before the development of the Mesaba ores, Mr. Carnegie was so much disturbed over the future of the industry that he employed a well-known geologist, whose letters are often seen in the MANUFACTURERS RECORD today, to spend a year looking for a new source of ore supply in the Virginias large enough to meet the needs of the Pennsylvania industry. During that year of investigation the Mesaba ores came upon the market, and the whole industry, over night, was changed from uncertainty to abounding prosperity.

This came at a time when the collapse following the land boom all over the world had overstimulated the building of furnaces in the South for the purpose of booming town lots, and succeeding this came the Baring Brothers' failure, which stopped all investment of English money in the South. This was followed a little later by the panic of 1893, which almost wrecked the whole iron industry of the South. Its furnaces, with limited capital, had to meet the competition of the Mesaba ores, which, in those days, could be mined and put on the cars at 25 cents a ton, and under these conditions, with iron selling in Birmingham at \$6.50 to \$7.50 a ton, it is rather surprising that any of the companies in that district stood the strain. But there are in Alabama, as in Virginia and Tennessee, furnaces which ran through all of that long period of depression and low prices and weathered every storm and demonstrated the inherent strength of the iron-making resources of the South.

When the panic of 1907 swept over the country it found the iron interests of this section again at a crucial period, just as large developments had been undertaken by a number of companies with the expectation that continued ease of the money market would enable them to carry through their improvements. The inability after the panic of 1907 to get new money for Southern enterprises made it difficult for some of these concerns to live. But if the great companies of the East and of the West had been placed in the same position, they, too, would have had very hard sledding and many of them would have failed.

The big companies operating in the West and in Pennsylvania found it necessary from time to time to do a great deal of re-financing, but as they were in closer touch with the financial interests of the nation, they were able to do this to better advantage than Southern properties.

With all due credit to the financial people of the East, who have co-operated in the development of the South, it can be broadly stated that the South has never received the proper consideration on the part of the financiers of the East. It has never been adequately understood, and comparatively few great financial leaders have, with any degree of intelligence and co-operation, broadly undertaken to give to the South the financial strength which they

have, for a generation or more, given to the West and to the Pacific Coast.

Some will say that this is the South's fault. In part, this is true. The free-silver craze, which swept over the South in 1896, gave this section a black eye for many years. Following this came the wild craze against corporations, which hit the same black eye another blow and still further alienated the interests of the big capitalists of the country in the South's development.

The resources of this section would have been more intelligently studied and appreciated if it had not been for these adverse factors. It is true that to some extent this free-silver craze and the hostility to corporations existed in other parts of the land, but nowhere else were they so virulent as in the South, and yet nowhere was there a section which could so ill-afford to stand the injury of such wild manias as the South had.

The South was weak financially, while other sections were strong financially.

They could take risks which the South could ill-afford to take, but the South took greater risks than they did, and the South, therefore, has had a harder fight to regain its financial strength and to win back the confidence of the capital of the country.

It may seem that this is a hard charge to make, or an unfortunate confession to bring forth against the South or about the South, to the development of which the MANUFACTURERS RECORD has given all of its energy for a third of a century, but these are the facts, and we might as well face the situation frankly, and by knowing the conditions seek to overcome the adverse influences which the South itself put in motion.

Notwithstanding this situation, the conditions which have now developed in the effort to bring about "National Preparedness" must of necessity focus upon the South the nation's thought and study, and if the financial leaders of America are wise they will recognize the supreme importance to their individual interests as well as to the nation to turn into this section the largest possible capital that can be utilized in the development on a great scale of the iron and steel and munition-making industries of the land. If they fail to do so, they will be recreant to their responsibilities to the business interests of the country and to the nation itself.

## OUR NAVY AS COMPARED WITH THAT OF OTHER COUNTRIES.

THE people who have been claiming that our navy ranked next to Great Britain's, thus outranking Germany's, utterly disregarding the facts in the case, not intentionally, we may be sure, have doubtless had a sad awakening in the official statement of Secretary Daniels, furnished to Congressman Madden last week. In that statement, taking the dreadnaught as a basis of comparison, it showed that at the beginning of the war the number of dreadnaughts was as follows:

Great Britain.....	46
Germany .....	28
United States.....	14
France .....	13
Japan .....	8
*Russia .....	11
Italy .....	6
Austro-Hungary .....	4
Spain .....	3
Argentina .....	2
Brazil .....	2

\*Three of these are in the Black Sea.

In this list Germany is shown to have exactly twice as many dreadnaughts as the United States. Moreover, some of ours are so slow and their guns have so short a range that they would be absolutely valueless in any battle with ships having greater speed or longer range of guns.

As short as we are in battleships, we are even shorter still in cruisers, scout ships, submarines and other naval equipment.

Those who have backed their opposition to an enlarged navy on the ground that our navy was second to Great Britain's and superior to Germany's, should now in all fairness right-about face and advocate the enlargement of our navy until it at least reaches the point which they thought it already held.

## THE SOUTH NEEDS MORE RAILROADS.

IT is imperative that there should be a large increase in railroad building, and that right soon. In the South especially is the need for a heavy enlargement of mileage apparent. Last year, as shown by the annual review of construction recently published in the MANUFACTURERS RECORD, there were only 503 miles of railroad built in the Southern States, which was the smallest amount for a twelve-month since the compiling of data concerning railroad construction was begun many years ago. This was a decline from a total of 3331 miles in 1907 and from more than 2000 miles as recently as 1912; as compared with ten or fifteen years ago the drop is even more impressive.

In spite of the fact that railroad baiting as a recreation and advertisement for certain types of politicians has fallen into a considerable degree of disrepute, it still persists in some commonwealths and communities, perhaps, in some instances, because of lack of opportunity by the people to study transportation conditions from a broad viewpoint, but in others owing to a prejudice against railroads born of hatreds developed long ago before the companies had learned that it was better to say "the public be pleased" rather than the other thing made notorious by one of the old-time railroad "kings."

But it is high time that everyone should fully comprehend the very plain fact that the welfare of the country generally and specifically is so bound up with the welfare of the railroads that all hands ought to let bygones be bygones and pitch in heartily to work hand in hand to obtain such an increase of transportation facilities that there will not be any opportunity of a repetition of the congested conditions which prevailed several years ago, and which choked the main arteries of commerce and industry even on the largest of our railroad systems. The rapid recovery which the railroads of the South and of the entire country are displaying as compared with their conditions a year ago may be accepted as a sign forecasting greater and greater railroad business to come this year and next year and, indeed, indefinitely.

There is an enormous and growing demand for the products of the South. To develop its resources to a degree sufficient to meet requirements necessitates more railroads, and that right now. Capital is ready to build them if it can be assured of reasonable treatment by legislative bodies. But if it is to be penalized by harassing laws planned for vote-getting, the money will turn aside to seek other fields of employment where it can be treated fairly and not like a criminal. This is the plain truth of the matter, and the sooner the people of the South generally realize it the sooner will they obtain the enlargement of railroad lines which they need to place all the rich resources of their country in the markets of the world.

If the public will only make it clear that its wish is to encourage railroad construction, its representatives will promptly take the hint (for every one of them has his ear to the ground), and will amend their legislative courses accordingly. Look at the decline of railroad construction in this section during the last four years. In 1912 it was 2026 miles; in 1913, 1753 miles; in 1914, 911 miles, and in 1915, 503 miles! Think of it, a drop of 75 per cent. in that short time! What caused it? Attacks upon business in various ways. Investigations, inquiries, imposition of restrictions, all in the name of the people; but, after all, the people lost more than anyone else, for capital might afford to wait until the storm blew over, but most folks could not, and consequently they suffered. Now that business has in large measure got under way again, it is essential that every encouragement be given to railroad plans for extension and enlargement, else the balance between the volume of traffic and the capacity of the lines to handle it will be so disturbed that serious embarrassment and loss must follow to industry, agriculture and commerce.

Railroad men interested in the South realized from the beginning of construction on the Panama Canal by the United States that this great waterway was

bound to have an important effect upon railroads in this part of our country. There are several plans now under construction which are designed to take advantage of the opportunities that the canal presents, but there are others which experienced a setback owing to the disturbed conditions affecting railroads, but which might now be again taken up by their promoters and completed if given the necessary encouragement. Besides, the existing railroads have in mind plans for various extensions or branches which will be put into execution just as soon as conditions are favorable. It remains with the people to see that such a change of conditions with respect to the transportation companies is brought about.

## WHEN TECHNICAL ADVICE IS NEEDED.

WHEN a man is ill he sends for a physician and follows his instructions.

When a man is in legal trouble he sends for a lawyer and commits his case to him and trusts to his legal knowledge to bring him out of his difficulties.

When a man wants to buy or develop a mineral property he sends for a mining engineer or a geologist and is guided by his advice.

The doctor and the lawyer and the mining engineer and the geologist are the experts whose lives have been given to the study of the problems which the layman must face in sickness, or law, or business.

When a nation, however, must face a serious situation as to what plans should be developed to increase the efficiency of its army and its navy to meet the problems of possible war, many laymen scout at the idea of seeking technical advice from the army and the navy experts whose whole lives have been given to the study of these questions and who in time of war the nation would have to call for its defense and upon whom the nation's life would depend. These men, experts by long study of problems about which the layman is as ignorant as the sick man about his ailment or the remedy, or as the layman about geologic strata and mining engineering work, are almost ignored and their advice disregarded. Sometimes they are called before Congressional committees, but many members of Congress and millions of citizens and some newspapers completely disregard all the advice which these experts give.

The layman who knows nothing about the art of war or about the questions to which these men have given their lives assumes an air of superior knowledge and authority and dismisses, often with an air of supreme contempt, the advice of these experts.

Many editors, who are supposed sometimes to have the right to express an opinion on anything, whether they understand it or not, constantly take issue with these army and navy experts and criticize their views as though they were men without standing or without knowledge of the subjects discussed.

Should we, however, some day have to face a war, these same editors and laymen would be bitter in criticism of the army and navy experts because they were not able to do impossible things. They would be criticized as though they had never seen their advice utterly disregarded.

The sick man who refuses to heed the advice or take the medicine of the physician is likely to die; the owner of a mining property who undertakes its development contrary to the advice of the geologist or the engineer is likely to go broke, and the man in legal trouble who refuses the advice of his lawyer will likely lose his case. The sick man may not learn his mistake until the stamp of death is upon him, the mineral landowner may only come to his senses when he has wasted his money contrary to technical advice, and the man in legal difficulties may wake up to find that when he tried to be his own lawyer he had a fool for a client.

Similar conditions may face the United States unless we are willing to recognize that the army and navy experts who have given years of study to these problems may know a little more about the situation and the needs of the hour than the laymen, who, in the main, are distressingly ignorant of the whole proposition.



## THE HOUR OF OPPORTUNITY TO DEVELOP SOUTH'S IRON AND STEEL INTERESTS.

THE greatest opportunity which the South has had for many years to bring about a larger development of its iron and steel interests is afforded at the present time. The overwhelming demand for iron and steel in all their finished forms, both for domestic and foreign consumption, has brought about a condition such as this industry has never before seen.

There have been periods of great activity when the demand exceeded the supply and when consumption was running ahead of production, but these conditions existed during periods of almost phenomenal railroad building and broad national activity. At present the tremendous activity in iron and steel exists without much railroad building and without that widespread national prosperity which alone in times past brought about such conditions in iron and steel as at present exist.

With the gradual trend of capital back into railroad development—due in part to the friendlier feeling which of recent years has been growing up for railroads in place of the foolish and unjustified hatred that so long existed—with a tremendous increase in the automobile and motor truck industry, which as yet is really but in its infancy, and with a better spirit for all constructive upbuilding work than existed for some years, and all of this added to the certainty of a great expenditure in the enlargement of our Navy and of a vast outlay in the building of merchant ships made necessary by the war conditions, the outlook for iron and steel is one of exceptional optimism.

With all of the iron and steel plants of the North and West crowded to the limit of their capacity and large expenditures being made for new plants and the extension of existing plants, it becomes of vital importance to the South—and, indeed, to the nation—that this propitious time should be utilized for a more complete development of the great iron and steel possibilities of the South. In this section, where vast ore supplies are in close proximity to coking coal; where increasing wealth and population are affording an ever-increasing market, it behooves the people of the South to put forth greater efforts than ever before to make certain of a large development of our iron ore resources.

The South ought not to depend upon outside people and outside capital for leadership in this work. However much it may need the incoming of outside men and money in this work, the South itself ought, aggressively, to begin a campaign in such a way as to commend itself and the opportunity to men and money from other sections. It is all very well to insist, as the MANUFACTURERS RECORD has been vigorously doing, that the leaders in the iron and steel industry of America will be recreant to their responsibilities if they do not of their own volition take an active part in the development on a large scale of iron and steel in the South. Nevertheless, while this is true, the South must not wait on these people, but it must lay its plans for its own development and go at the work vigorously now while the opportunity exists.

Alabama, for instance, has waited too long and depended to too great an extent upon the Steel Corporation. Some of the other interests there have made good progress, but some have done comparatively little of recent years. The coal and iron men of that district should go ahead with their plans for development as vigorously as if they had never heard of the Steel Corporation, and create new and large industries without any regard to whether the Steel Corporation acts promptly in the further development of its interests there or whether it waits on the slow progress of the suit against it.

There are a number of iron and coal companies in Alabama which should be taken hold of vigorously and combined into one or more really great corporations worthy of their output and of their abundant supplies of raw material. Aggressive leadership is needed in this work. Companies which are now engaged purely in making pig iron and which are not utilizing to the fullest their advantages even for

that should, in a number of cases, be brought into a new combination or combinations and with ample capital enlarge or rebuild their plants and establish diversified interests for consuming their pig iron at home and thus put the district in a way of larger development and of greater employment and money making.

We are afraid that the Alabama district, while waiting on the Steel Corporation, has to some extent forgotten to recognize its own opportunities for larger things outside of the Steel Corporation.

It is true that the conditions for the last seven or eight years have not been at all encouraging for new investments in ironmaking, but the whole situation has now changed and this is the crucial hour in the history of the iron and steel and kindred interests not alone of Alabama, but of the whole South and Southwest.

Persistent efforts ought to be made at the same time to induce some of the larger automobile manufacturers to establish branch plants in the South. This section can provide the raw material and the labor, and it also furnishes a large part of the market. As it is especially important for the widest national prosperity as well as for safety in time of war that the steel production of the country should not, as at present, be so largely dependent upon Lake Superior ores, so it is equally important that the automobile and motor truck industry should not be centered, as at present, to so great an extent in regions dependent upon steel made from Lake Superior ores.

Neither the iron nor steel nor the automobile nor the locomotive building interests of the country can afford to take the risks which they are now carrying. They should turn their attention to the South, and at the same time the people of this section must thus become aggressive factors in beginning this work of larger development.

## INDUSTRIAL GROWTH OF SOUTHERN CITIES.

SINCE the last preliminary summary of American manufactures reported in the MANUFACTURERS RECORD from week to week, the industrial census of the following Southern cities has been reported by the Census Bureau of the Department of Commerce:

Savannah, Ga.: The amount of capital invested in Savannah in manufacturing enterprises was \$10,247,000 in 1914, against \$9,191,000 in 1909, an increase of \$1,056,000, or 11.5 per cent., while the value of its products in 1914 was \$6,709,000, a gain of \$170,000, or 2.6 per cent., over \$6,539,000 in 1909.

Winston-Salem, N. C.: For the 73 manufacturing establishments reported in 1914, the capital invested was \$25,703,000, having an output valued at \$37,288,000.

Shawnee, Okla.: As reported in 1914, the amount of capital invested was \$1,534,000, a gain of \$33,000, or 2.2 per cent., over \$1,501,000, in 1909. The value of the products was \$2,598,000 in 1914 and \$1,941,000 in 1909, the increase being \$657,000, or 33.8 per cent.

Martinsburg, W. Va.: In 1914 the capital invested in industrial enterprises was \$2,630,000, as against \$2,100,000 in 1909, an increase of \$530,000, or 25.2 per cent., and the value of its manufactured products was \$3,022,000 in 1914, a gain of \$507,000, or 20.2 per cent., over \$2,515,000, in 1909.

Durham, N. C.: Durham, which had \$12,503,000 invested in manufacturing in 1914, showed an increase of \$2,849,000, or 29.5 per cent., over \$9,654,000, reported for 1909. The value of its products was \$27,597,000 in 1914 and \$23,027,000 in 1909, an increase of \$4,570,000, or 19.8 per cent.

Anderson, S. C.: There were 28 manufacturing establishments reported in 1914 for Anderson, with a capital investment of \$2,575,000, producing an output amounting to \$1,904,000.

Spartanburg, S. C.: With a 2 per cent. decrease in manufacturing capital, Spartanburg reported a gain of 6 per cent. in the value of its manufactured products. In 1914 the capital invested was \$4,380,000, against \$4,471,000 in 1909, a decrease of \$91,000, while the value of its products in 1914 was \$3,473,000, a gain of \$197,000 over \$3,276,000, in 1909.

## VOTING ONE WAY AND PRAYING ANOTHER.

THE Herald records another nobody named Joy, a manufacturer of Detroit, Mich., who "feels ashamed of being an American citizen." What's the matter with a Detroit sewer as the solace for the barnacles on Mr. Joy's so-called Americanism and the bunions on his regrets? It's rough on rats.—Portsmouth (Va.) Star.

It so happens that Mr. Joy is the president and dominant spirit in one of the greatest manufacturing concerns in Detroit, the Packard Car Co.; is a member of the Federal Reserve system and in general one of the foremost business men of America; an enthusiastic, broad-gauged American citizen, who has created employment for many thousands of people; a man of national reputation for his work for good roads and who has organized and contributed \$150,000 toward the Lincoln Highway.

And it is of such a man that the Portsmouth Star disgraces Southern journalism by its billingsgate vituperation! Would any manufacturers from other sections care to locate in a city whose leading paper got down in this way in the sewer to denounce his economic theories?

This statement of the Portsmouth Star merely serves to bring out all the more clearly the truth of a recent editorial in the MANUFACTURERS RECORD in which personal abuse of those who disagree on economic or political grounds from the views of Southern papers was pointed out as a distinct business injury to the South. This is one of the serious handicaps of the South. It is in the power of the leaders of the press in the South to change the whole situation, and they owe it to the progress of this section to do so.

Until there is diversity in thought and in politics, diversity on the farm and in the factory, the South cannot reach its fullest development. Its newspapers, with all the splendid work that many of them have done, should recognize that men coming from other sections, as well as many men to the "manor born," do not agree with the dominant economic views of Southern newspapers, but there should be given to these people the right of opinion untrammelled by such criticisms as that from the Star, and, unfortunately, we have a good many similar criticisms. Men should be permitted, without calling forth denunciatory criticism, to advocate doctrines contrary to those at the moment held by Democratic leaders and the Democratic papers. We said "at the moment hold" advisedly because Democratic policies change just as often as Republican policies, and possibly a little oftener. In 1896 the Southern man who dared to oppose the Free Silver-Bryan fetich was bitterly denounced by most Southern papers, but to-day nobody believes in that humbug doctrine.

It is right and proper that those who want to be free-traders should hurrah to their heart's content for free trade, but in the South those who believe that protection is more essential to the South than to the North should have the privilege of saying so and of working to advance this condition without being criticized as though they were moved only by personal and selfish ends and were acting contrary to the best interests of the South.

Whenever any party has a monopoly for too great a length of time it generally becomes corrupt, whether it be Democratic or Republican. Pennsylvania became noted for the rottenness of its politics because of its hidebound devotion to the Republican party. It would have been infinitely better for Pennsylvania if the parties had been more equally divided and if the independent vote could have swung an election from one side to the other. Unfortunately for the good of that State, this condition did not exist, and as the politics of Pennsylvania typified the rottenness which develops when the Republican party has a monopoly for too long a time, so the South, here and there, typifies the evils which have followed too long a control by the Democratic party.

It is true that the South is in a different position from the rest of the country. The negro question is its bugaboo. But eventually the South will be either divided on economic grounds or the Democratic party will become a protection party, as it ought to be. For it is well known that a very large proportion of the leading business men of the South are at heart protectionists, and while they may vote for free-trade candidates, they pray for the election of protection candidates.



# America's Enormous Absorption of Securities Held Abroad

AT PRESENT RATE, INVESTORS IN THIS COUNTRY WILL OWN NEARLY ALL UNITED STATES RAILROAD STOCKS AND BONDS BY END OF THE YEAR.

New York, January 24.

If the European war lasts throughout this calendar year American investors will own nearly all the outstanding stocks and bonds of the railroads in the United States.

Last year Europe sold back to Wall Street over \$1,500,000,000 of American securities which it had bought prior to the war.

This year it will sell at least another \$1,500,000,000 to Wall Street, and on January 1 next, for the first time in its history, this country will own all but an insignificant percentage of the outstanding securities of American railroads.

Last year's enormous resales to us by Europe of our securities were chiefly railroad stocks and bonds. The percentage is estimated at 85. Investors abroad never took kindly to the issues of American industrial corporations, and until a short time prior to the war the disparity in the proportionate holding of such was pronounced.

There are outstanding about \$20,000,000,000 in stocks and bonds of American roads. At the time war was declared Europe held nearly \$3,500,000,000 of American rail issues, and since then it has been reselling them in this market whenever the price was attractive and the market would stand the absorption.

Since the first of the year Wall Street has had to buy every business day an average of approximately \$4,000,000 of American rails held abroad.

Europe is selling to get funds for the purchase of American goods, munitions or the products of American factories and farms. It must continue this selling as long as the supply lasts, or its need for everything we make or produce is as keen.

To bolster up its credit, and to lessen the alarming flow of its gold to New York, Great Britain successfully mobilized under Government control hundreds of millions of American securities owned by its subjects and has made them the basis for New York credits. Other hundreds of millions are coming into Wall Street in a steady stream.

Daily receipts of American stocks and bonds received at this center from abroad are so large that temporarily the investment channels are overburdened. Until this selling pressure is lessened, new securities, or issues of securities of new domestic corporations, face a somewhat lessened demand.

Until Europe either exhausts its supply or the necessity to sell is abated the American securities it still owns must come into the general stock market. Wall Street must, therefore, overcome selling orders both from home and abroad before it can advance prices to the higher level apparently justified by national prosperity, and hold the ground thus gained.

Last year the New York Stock Exchange sold on the floor railroad and miscellaneous bonds exceeding \$900,000,000, which compares with \$428,000,000 the year before and \$470,000,000 in 1913. This year its sales of these issues may exceed \$1,000,000,000, with the bulk coming from Europe, as was the case in 1915.

It also traded in stocks to the number of 173,000,000 shares in round figures, a good percentage of which was American rails owned in England, Germany, France, Holland, Belgium and other foreign countries.

These, added to the enormous amount of bonds of American roads sold back to us by Europe last year, greatly reduced her holdings. As of January 1, it is estimated that there were still owned abroad barely more than \$1,000,000,000 of American railroad bonds. England owned at least \$600,000,000 of these, and will dispose of most of them this year.

A concrete instance of how the United States is buying back from foreign nations the securities of its rail and industrial corporations is given by the changes in holdings of United States steel stock within the year. The foreign holdings of United States Steel decreased

41 per cent. in 1915 and 46 per cent. within 21 months prior to January 1, 1916.

England sold back to Wall Street last year 56 per cent of its Steel stock, Holland 39 per cent., France 26 per cent. and Germany 45 per cent.

But in spite of Europe's record-breaking foreign liquidation last year and thus far in the current year, to obtain funds for war purchases, the prices of bonds on the New York Stock Exchange are from 2 to 5 points higher for the leading issues than when the stock exchange opened after the panic.

Influential Wall Street bankers point to the current indications of railroad prosperity as one of the best indices of the course of national business this year. They say that American investors who are buying back standard American railway stocks and bonds as fast as Europe sells them are entering into full ownership of American roads at the psychological period.

Given a stock and bond ownership of nearly 90 per cent. of a \$20,000,000,000 investment, which will be practically the situation at the end of this calendar year, American investors for the first time will keep at home the indicated good returns from the nation's great transportation service.

A phenomenal change has taken place in railroad conditions since the close of the fiscal year June 30 last. The upward movement in earnings, which became evident in September, reached high records for many roads in October, November and December, and is still pronounced.

Southern and Western roads, which handled promptly in the fall and early winter months the heaviest crop tonnage on record, have lately been slightly hampered by other conditions. Eastern and trunk line carriers have been affected by severe storms and embargoes at Atlantic coast ports, but general business activity throughout the country ensures great gains when normal conditions are restored.

The net returns of United States railroads in 1915 showed an increase of about 20 per cent. over 1914, and yet nearly 75 per cent. of the total volume of business was compassed within the last six months of the year. As the direct result of the enormous increase in foreign trade, Eastern roads made record gross gains in November and December.

The new calendar year opened with railroad conditions so much better than those of a year ago that conservative bankers believe the current year may prove a high mark in gross and net earnings, and in efficiency and economy of operations. They also believe that the virtual elimination of foreign ownership of domestic railroad securities may result in a better understanding of railroad problems by National and State lawmakers.

Very visible evidences of prosperity in the transportation industry obtain. In November gross earnings of railroads increased \$66,310,622 over the corresponding month of 1914. December figures promise to equal or exceed this increase. While January gross may not reach the average increase of the previous two months, it will be quite large.

In addition there will be this difference:

There was general gloom and little freight to move a year ago. There is now awaiting transportation to destinations a vast tonnage of all kinds of freight.

The six months period, October to April, is expected to show an average net increase of nearly \$50,000,000 a month. For the year, unless war's uncertainties prove costly to domestic business, earnings should cross all previous high marks.

Along with the great improvement in the credit of railroads, their ability to borrow money for new capital needs at reasonable rates of interest, is the new knowledge of the people of the prime importance of railroads in all plans for national preparedness.

Just at the time when there is under way the first national mobilization plan for all units needed in the defense of the nation, it is considered opportune that

stock and bond ownership should be passing almost entirely into American hands. Within the year the vaults of Wall Street bankers and of American investors will hold perhaps nine-tenths of all outstanding bonds and stocks of American railroads.

A transportation system exceeding 250,000 miles, covering all sections of the country, employing 2,000,000 persons, earning a total operating revenue of \$3,000,000,000 a year and paying out in wages, operating expenses, maintenance, etc., over \$2,000,000,000 every 12 months, owned outright by United States investors is worth much consideration.

Some of the conservative bankers in the financial district are advising their clientele to study the new railroad situation. They point out that it is well worth the time.

## BEAUMONT'S IRON AND STEEL PLANT.

Declared by the Management of the Project That Plant Will Be in Operation Within a Year.

Further details regarding the plans of the Texas Steel Co. for the construction of an iron and steel plant at Beaumont include the prediction that the plant will be in operation within a year.

The enterprise has received the cordial co-operation of business men of Beaumont. Three-fifths of the capital stock of \$2,500,000 has been subscribed, and the complete working out of the company's plans is believed to be a matter of a short time.

Beaumont is declared to be an altogether eligible city for a steel plant. A 200-acre tract of high land has been selected for the site. It fronts on Neches River, which has 40 feet of water at this time. A deep-water channel was recently secured by the removal of obstructions at the bar, so that Beaumont is now an inland seaport.

The site of the steel plant has railway connections with all the roads of Texas, and through the Gulf & Interstate Railway will secure its iron-ore supply from the fields in Cass county, Texas. Here Col. L. P. Featherstone, the father of the enterprise, owns and controls some 100,000,000 tons of high-grade iron ore. Through intercoastal canal connections it will be possible to secure coal and coke from Alabama fields at a very favorable rate.

It is stated that the plans of the company have been worked out to the smallest details. A general manager has already been selected. He is familiar with the city and section, and has had a successful experience in the iron and steel business in the East. With 20 years' experience on top of technical education and training, he is said to be thoroughly qualified for the position of general manager of this plant.

Lewis L. Featherstone, a son of Col. L. P. Featherstone, and associated with him in the enterprise, is quoted as follows concerning the possibility of the development of an important iron and steel industry in Texas:

"In our opinion the establishment of this plant is merely the beginning. It is the nucleus around which will be drawn numerous allied industries. It will stimulate the manufacture of farm machinery, special parts for the heavier machines such as traction engines, gasoline engines and miscellaneous heavy hardware, to be followed later by the smaller factories fabricating everything needed to cover the demands of Texas. And these factories will arise at the most favorable points throughout the State, deriving their supplies from Beaumont. The whole of the State of Texas will feel the impetus and it will result in saving to the citizens of this State and the great Southwest millions of dollars annually in freight paid for the transportation of the ore to the Eastern furnaces and on the finished product back to Texas."

## Planning \$2,000,000 Tinplate Mill.

Another big industrial enterprise is planned for the river front at Baltimore, the capitalization to be \$2,000,000. This will be a tinplate factory, and it is proposed by J. E. Aldred of New York, chairman of directors of the Consolidated Gas, Electric Light & Power Co. of Baltimore. The details are being considered, and Mr. Aldred wires the MANUFACTURERS RECORD that it is impossible to give particulars at this time.

# The Comparative Value of Domestic Ammonium Sulphates and Imported Nitrates

By DR. DAVID T. DAY, Washington, D. C.

The present war has brought out with crushing force the fact that no nation should be entirely dependent upon another for the essentials of industry. The great shortage of dyestuffs and chemicals in the United States during the present war is a fair example of what may happen in such cases, and now that preparedness is the slogan of both the Administration and the people, industrial preparedness should have as large a place in national consideration as military preparedness.

Among the important products which the United States imports almost exclusively is nitrogen in the form of nitrates. Practically all the nitrates now used in the United States, or even in nearly all other countries, come from the famous Chile saltpeter beds. These nitrates are extensively used in fertilizing; in fact, have become practically an agricultural necessity.

Plants have in their constitution a certain amount of nitrogen as an essential constituent. It is found especially in seeds and in all tissues which are concerned in movement or reproduction. When plants and animals die, their nitrogen content is returned to the earth, and thus all land has some slight nitrogen in the form of nitrates of ammonium salts. When land has been cultivated season after season this nitrogen is used up, and before the land is efficiently productive again a nitrogen fertilizer is necessary. These, which are too numerous to mention, consist broadly in organic fertilizers, such as bone dust, etc., and in inorganic fertilizers, such as soluble salts, containing a large per cent. of available nitrogen. The two salts which easily predominate in this field are sodium nitrate ( $\text{NaNO}_3$ ) and ammonium sulphate ( $(\text{NH}_4)_2\text{SO}_4$ ). Sodium nitrate or Chile saltpeter, which is almost entirely imported from the beds in Chile, contains about 15 per cent. of available nitrogen when prepared commercially. It has until recently been held superior to its rival ammonium sulphate, which is manufactured as a by-product of the coke industry and which contains 19 per cent. available nitrogen. Thus ammonium sulphate contains from 4 to 5 per cent. more nitrogen than sodium nitrate, and the question has naturally arisen, Why is it not preferable as a fertilizer?

In the first place, due to improper treatment, ammonium sulphate was considered an inferior and even harmful fertilizer, and it has become evident that when used alone it does not attain its full efficiency, but upon mixture with superphosphates it has been used with exceptionally good results. On this subject Professor Hall, the English agricultural expert, makes the following statement:

"As a nitrogenous fertilizer, sulphate of ammonia is as effective, nitrogen for nitrogen, as nitrate of soda; it is to all intents and purposes as rapid in its action, etc."

Still more recent experiments performed in Germany show that ammonium sulphate when properly used gives even greater results. These experiments performed in the interests of the beet-sugar industry give the very latest scientific light on the subject and show conclusively that ammonium sulphate can be used with good effect as a fertilizer.

Now ammonium sulphate is produced in this country in large quantities as a by-product of the illuminating gas and coke for iron industries, but only about one-fourth of the available product is saved under present conditions. It is now possible by means of new machinery and processes to save a large part of this wasted product, and steps should be taken immediately toward this end. Especially in the South, which is the logical place for the spread of industrial preparedness, should such steps be taken. The South has ample facilities in the way of coke ovens for iron works and blast furnaces and gas works to convert waste ammonium sulphate into an extremely important commercial product. The ammonium sulphate is not only useful for fertilizer, but the benzol and toluol obtained with it in cokemaking may be converted into forms suitable for use in the manufacture of powerful explosives.

Germany, unable to buy nitrates from Chile, is making practically all her explosives from this source.

It is maintained by the manufacturers of ammonium sulphate that, by co-operating with the hydro-electric power companies, the Government is hindering their industry as a by-product of the coke plants. Such is hardly the case, as the nitrogen manufactured from the air is rather too expensive at present to compete with ammonium sulphate in the fertilizer field, but all the nitric acid which can possibly be made by electricity from atmospheric nitrogen by the use of hydro-electric power will find a market at high prices for the manufacture of high explosives, even after the war stops.

## CONDITIONS IN THE BIRMINGHAM DISTRICT.

### Continued Lull in Pig-Iron—Brisk Business in Cast-Iron Pipe—Blowing in More Furnaces.

Birmingham, Ala., January 22—[Special.]—The past week marked the quietest buying of pig-iron since the market took on its "leaping" tendency. It was naturally expected that buying would be retarded preceding the holidays, but hardly to the extent of the present situation, and for so long a time. The furnace companies are not giving the lull much concern, due to the fact that the "let-up" has rather been a boon. It has given them time for consideration of shipments of iron already on their books for delivery at once and through the first quarter. Car shortage had become a serious detriment to shipping, and buyers were calling for their iron at such a rate that congestion was occurring.

One furnace interest reports that it not only did not make sales of more than 200 tons during the week, but received several requests from buyers to hold up shipments. Another interest reports the sale of 850 tons during the week; another furnace, 650 tons. A conservative estimate of the week's sales is between 2000 and 2500 tons. Buyers seem to have stabilized themselves, being contented with what iron they have bought for first half delivery, and, in a measure, taking chances on the last two quarters. There has been a lot of discounting as to steel requirements, and it has been only this one thing that has boosted pig-iron in its recent spurt.

However, the lull in purchases has not had a tendency to lower prices; they are holding firm at \$15.50 for first half and \$16 for last half delivery. Following are prices:

No. 1 foundry and soft.....	\$15 50 to \$16 00
No. 2 foundry and soft.....	15 00 to 15 50
No. 3 foundry.....	14 50 to 15 00
No. 4 foundry.....	14 00 to 14 50
Gray forge.....	13 75 to 14 25
Basic.....	15 00 to 15 50
Charcoal.....	23 00 to 23 50

The cast-iron pipe manufacturers are enjoying an exceptionally good business at this season of the year. Orders on books continue to warrant constant operation many months ahead. The Central West and Far West are in the market for good tonnages. Manufacturers report prospects very satisfactory. The soil-pipe manufacturers are also well sold ahead, as well as an increase in inquiries. Following are prices per net ton f. o. b. cars at the plant, on water and gas pipe: Standard sizes, four-inch, \$26; six-inch and up, \$24, with \$1 per ton extra for gaspipe and 16-foot length pipe.

Owing to the fact that low prices of pig-iron is getting pretty well off the yards of manufacturers, the old material demand is strengthening. Up to the present time there has not been a comparative response in the

raising of scrap prices in keeping with pig-iron. Old dealers report inquiries better and sales increasing. Following prices are quoted per gross ton f. o. b. cars here:

Old steel axes.....	\$14 50
Old steel rails.....	13 00
No. 1 steel scrap.....	11 00
No. 1 country wrought.....	10 50
No. 1 cast.....	11 00
Light stove cast.....	9 00
Old car wheels.....	11 00
Mine car wheels.....	10 50

The demand for domestic coal has materially increased the past week, on account of cold weather. There has been some improvement in steam coal trade, though not enough to warrant special mention. There is being shipped down the Warrior River for Gulf coast points an average of 20,000 tons of Alabama coal per month.

The coke trade continues brisk. Surplus Alabama coke is a scarce article. Spot and first half furnace coke is quoted at \$2.75 per ton at the ovens; spot and first half foundry hand-picked coke is quoted at \$3.75 to \$4 per ton at the ovens. Coke is being sold on this basis right along.

The Alabama Company will blow in its No. 1 furnace at Ironston, Ala., on February 1. It is now being dried out. The blowing in of this stack will mean an additional 5000 tons of pig per month for the district.

The Gulf States Steel Co. will blow in its large basic furnace at Alabama City on the 25th inst. The blowing in of this furnace will mean practically 10,000 tons additional iron for the district per month.

The De Bardeleben Coal Co. is seriously considering putting in a dam above Cordova, Ala., with the approval of the Government, in order to make the Warrior River navigable several miles above Cordova, present head of slackwater. With the completion of such a project at least 175,000,000 tons of Alabama's highest grade coal would become available for shipment by all-water route to Gulf coast points. Y. A. DYER.

## CLINCHFIELD COMPANY'S COAL PLANT AT GALVESTON.

### Will Have Entirely Up-to-Date Equipment for Loading and Unloading, With 25,000 Tons Storage Capacity.

The Clinchfield Fuel Co. has let contracts for the building of a modern coal storage loading and unloading equipment at Galveston, Tex., and work will be commenced at once, according to information received by the MANUFACTURERS RECORD from President C. E. Bockus of the Clinchfield Fuel Co., New York.

This development has been under consideration for some time. The fuel company has secured by lease from the Galveston Wharf Co. 400 feet of the wharf in the center of the city, and will have a storage capacity of 25,000 tons of Clinchfield coal, with a most up-to-date coal-handling apparatus, designed specially for this particular plant by the Lidgerwood Manufacturing Co.

This plant is to be operated in conjunction with the new barge recently built by the Clinchfield Fuel Co. at the Clooney yards, West Lake, La.—a barge which is equipped with a dragline bucket and conveyor for handling coal into steamers' bunkers. This barge is the first of the type on the coast, and thus far has proved fairly satisfactory in operation.

The floating equipment of the Clinchfield Fuel Co. at Galveston also includes two other barges, one of which will be equipped with devices for bunkering steamers. The fuel company still maintains a supply of bunker coal at Texas City.

The lease for the new coal yard was signed three months ago, and since then all plans have been drawn, the contracts actually let, and it is confidently expected that before early summer the yard will be ready to handle coal.

As regards plans at other ports, there is nothing to be said at the present moment.



# Industrial America Must Prepare for Fiercest Competition Ever Known\*

GRAPHIC PORTRAYAL OF CONDITIONS THAT WILL CONFRONT THE  
MANUFACTURERS OF THIS COUNTRY WHEN EUROPE TURNS  
FROM WAR TO TRADE.

By JAMES A. EMERY, Washington, D. C.

We have all shared in this remarkable prosperity that has so surprisingly fallen upon us since the outbreak of this widespread and bloody European war, and in this hour and in this day we find ourselves suddenly confronted with a wide-reaching campaign for military preparedness. Many organizations, many patriotic men, seek to arouse within us a realization of the necessity for adequate national defense, and on the other hand, we are confronted with an almost equally widespread campaign that insists that preparation for military defense invites military aggression. We find all shades of opinion from those who would have us not only expend much of that which we presently have, but accept new debts to prepare ourselves against the possibility of foreign attack, to those gentlemen who believe that the best possible way in which to defend ourselves is to lie in an attitude of supine submission which will awaken the pity of those whose ambitions might lead them to turn their eyes to our undefended shores.

But whether or not we are in danger of military attack from abroad, this is written upon the skies of the future in letters which he who runs may read, that the conclusion of this horrible struggle on the other side of the water will be followed by a commercial competition probably vaster in its proportions and severer in its intensity than any we have ever experienced. We are sitting by, good easy men, basking pleasantly in the sunlight of this present prosperity as though the imperative demand for the things that we have sent to the value of billions across the water was to continue in spite of ourselves.

We have passed through a period in which the necessities of millions of mankind have not permitted them to consider anything but their necessities, not our prices. Yet what drove these nations into this vast and unbelievable struggle? What was the precursor of this gigantic conflict? It was an economic situation that will exist after this war, and that will impel the nations of Europe to an accelerated activity as it forced them year after year into the anticipations of this struggle for many decades before the awful hour in which it broke.

We have been a fortunate people, with vast and almost untouched resources of national wealth; with a domestic market so great that even the gigantic industrial strides of our people since the Civil War have only enabled us to substantially supply its demands; when this great war broke out we were exporting but about 5 per cent. of all that we produced, but Europe, with its thickly-populated countries, was under the continuous necessity of finding a market for its surplus product, and today all of its peoples are being left without employment, for the nation that cannot market that which it produces in excess of that which it consumes is a nation that cannot find employment for its people. And if that market ceases, unemployment, discontent and social disorder follow in its track.

Now suddenly we find ourselves faced with this great struggle, which has shut off 65,000,000 of the German people from the markets in which they were most efficient competitors, and the other nations, their antagonists in this great war, are so busy defending their national being that they can only turn to us for the means of defense, and they are substantially unable to find time to sell more than a small portion of their wares in the normal markets of mankind.

Just for a moment let us glance at the condition that preceded the war, and the one in which we find ourselves today, and see how strikingly true this is. Take the first nine months of 1913, and you will observe that our foreign exports were substantially \$1,-

733,000,000; in the same nine months of 1914, to which your memory can easily turn, there was a falling off in those exports of \$300,000,000 to \$330,000,000. Then take the first nine months of 1915, and you will find that they have increased over the preceding year's \$1,065,000,000. How striking these increases are in some departments let me illustrate by a momentary glance. A comparison of the exports to Europe from September, 1913, to September, 1914 (10 of these months before the war and two of them after it had been started), with our exports from September, 1914, to September, 1915, when our war trade was in full bloom, will show that in the first period we shipped to Europe \$181,500,000 worth of breadstuffs, and in the second period \$567,000,000; that we exported \$103,000,000 worth of wheat in the first year to which I referred, and \$316,000,000 worth in the second; that we exported \$34,000,000 worth of automobiles in 1913-1914 and \$92,000,000 worth of automobiles in 1914-1915; that we exported during the first period \$4,753,000 worth of woolen goods and \$32,000,000 worth of woolen goods in the second period. We did a little horse business, too. We exported to Europe \$3,000,000 worth of horses in the first period named and \$82,000,000 in the second period. We sold \$612,000 worth of mules to Europe in 1913-14 and \$18,000,000 worth in 1914-15. Of steel bars and billets, \$7,500,000 worth in the first period and \$21,000,000 worth in the second period; of machine tools, \$12,500,000 in the first period and \$34,000,000 worth in the second; of harness and saddlery, \$793,000 and \$18,500,000 in the second. And so the comparison runs through the whole line of exports.

You remember that that war demand lifted us out of the slough of despond up to the very heights of prosperity so great that we are now weaving bright dreams of world commerce for the future. Now, must it not inevitably follow that as much of this business has been gained without competitive conditions, it means necessarily that it must cease when competitive conditions renew themselves? First, because the demand for many of these things will cease with the end of the war; secondly because when many of these nations are again working under normal conditions we will find, if we measure the future by the past, it will be economically impossible to compete with them, either because of their superiority in efficiency and production or because of their possession of cheap raw materials obtained at a lower labor cost, or because they possess facilities and means of distribution and of access to markets that we did not have and cannot presently possess ourselves of.

Now, while we were enjoying this war business, notice what happened to our normal markets. We have not done a larger business with South America in comparison with our European competitors, and yet South America is a large market which imports about \$1,300,000,000 worth of various products. Some of the South American countries under normal conditions are good spenders. The little country of Argentina, with a population of 7,000,000, buys from us as much as China, with her population of 500,000,000. Yet if we take a particular month for comparison, say one of the last months for which we find any figures, we find that in October, 1915, we sold \$2,000,000 worth less goods to Argentina, Chile and Brazil than we sold them in October, 1913, before the war. We sold \$3,500,000 less worth of our goods to Japan in October, 1915, than we did in October, 1913.

So these normal markets fell below normal, while the abnormal markets have not only centered our attention, but they are bringing about a condition that is not an unmixed evil in our manufacturing industries, because with the high prices offered on shipments for instantaneous delivery we find conditions coming into being in our labor market that it will be impossible to nor-

mally live with under the normal conditions of peace. Indeed, what will be the situation if the war suddenly ceases and we find ourselves confronted, not only in the foreign markets into which we have penetrated, but even our domestic market itself, with the competition of desperate nations who, with their backs to the wall, will be compelled to furnish employment to their people who have been trained in the strictest discipline in the sternest of all schools, that of war, and will be faced with the necessity of regaining the position which they formerly had in our own market as well as in those foreign markets which we now temporarily possess? Under such conditions can we hold what we have? Nay, is there not danger that we shall find difficulty even in our domestic market itself, the most inviting market in the world? Will there not be at least one great nation that will have a very accelerated impetus to attract it toward the invasion of the American domestic market?

Stop a moment and glance over the situation that exists in Europe today. We all recognize, whether we agree or disagree or sympathize or do not sympathize with the position of this nation in the European war today, that the German Empire presents the most remarkable combination of private enterprise and governmental co-operation of which we have any experience. It possesses the largest body of most highly efficient workmen. Today Germany possesses her industrial structure intact. More than that, she has in addition four-fifths of the iron and steel sources of supply of France and three-fifths of the iron and coal supply uninjured by the ravages of war that remain in Belgium, the workshop of Europe.

If this great struggle ended tomorrow we would find Germany, having lost many of her greatest customers, forced into new markets to find employment for her people; for that she must find; that compelling economic necessity is the first and greatest driving force that will push her economic life. South America, into which Germany has largely penetrated, cannot with English, American and other competition find her an easy market. She will not find it among the allies. Why should she not naturally turn her attention to us and enter this great American market, and under what conditions will she enter it? If she entered it under the conditions that exist in our industries today, she would find us with short hours, with high wages, with low efficiency, confronting a competition which in Germany's case would represent long hours, low wages and high efficiency.

In the long run we must face the fact that economic laws are as certain in their operation as any other laws of nature. The nation that is economically superior to another wins in competition with it. Indeed, there is no little evidence that it was economic superiority in this or that department, of one nation over another that aroused the envies, fears and distrust and hatreds of the nations now in armed conflict.

If we are to hold our markets—most of all, if we are ambitious to win a place in the world's markets, to take that great place that the God of nature has offered to us, in the circumstances that now present themselves here, what it is essential that we must do if we are to hold, much less win a large share of the trade of the world, is to give greater employment to a larger number of people, and add to the national wealth that comes from participation in the great market places of the world.

In order that a nation win commercial supremacy, there are some things that she must have from natural sources, or that she must be able to supply with ease, expedition and cheapness. Among the first of these is cheap fuel, cheap power, and this we have in vast quantities. We must have cheap raw material, the basic metals, the treasures of forest, field and mine, and these we have in great quantities.

But we must have more than that. We must have low labor cost and not low wages, for the highest possible wages are quite compatible, indeed go hand in hand with low labor cost. There are only two ways by which efficiency comes about—increased skill and intelligence upon the part of the worker, and an equal increase of intelligence, skill and ability on the part of capital.

Capital is the directing force in industry that is continually seeking new processes by which to cheapen or improve production, new materials, new machinery; that applies science and invention at every step of the

\*Extract from address delivered before convention of Hardwood Manufacturers' Association, Cincinnati, O., January 18.



way. On the other hand, we find ourselves faced with a condition in the United States today in which labor is not becoming more efficient but, on the contrary, there are many evidences that forces are in operation that are undertaking to substitute for the efficiency of the individual the efficiency of some organization to which he belongs, upon the theory that it possesses power to exact a wage which it is not essential that the worker should have the efficiency to command. This is an economic condition—that in the long run is as injurious to the worker as it possibly can be to the employer. Such a condition, should it long exist, will hardly confine its expression only to our factories, but will have its necessary reaction in our politics and in our society.

We have passed through a period in which there has been a legislative attack on all forms of business; in which there has been a determined effort to excite suspicion directed toward business combinations and business corporations, and in the making of laws to create one set of rights for them and another set of rights for the employees who work under their supervision and direction. This has found its expression in such legislation as we have had, where the Sherman Anti-Trust Act has been rigidly enforced against combinations of employers, and prosecution after prosecution has been directed against business enterprises, while the same Congress that did it and urged it attached an amendment to the Sundry Civil Act which provided that no portion of the funds appropriated for enforcement of the Sherman Anti-Trust Act should be used to prosecute labor organizations or farmers' organizations which violated that law. This made it lawful and right for one body of our citizens to do that which it made unlawful and wrong for another body of citizens to do. Nay, it did worse than that, for without changing the law they suspended it and said: "We will enforce this act with the funds of the public treasury against one portion of our citizenship, but we will not enforce it against another."

When that day comes in this republic that it shall be lawful and right for one body of men to do that which it is unlawful and wrong for another body of men to do, we will have created classes and castes in our citizenship that will eat into the very fundamentals of the Government under which we live.

But we need, in addition to raw materials and fundamental metals, every encouragement to an increase in the efficiency not only of our workmen but of our employers, our business men, our manufacturers. They can never criticize with justice any movement toward inefficiency or toward the substitution of efficient organizations for efficient individuals on the part of employees as long as they on their part are omitting to perform their tasks, obligations and duties as directors of industry in the highest and best sense of industrial and social responsibility, and yet we are confronted now with legislation the very purpose of which is to penalize efficiency.

Last year the appropriation for the support of the army and navy had attached to it a prohibition that no portion of such moneys should be used to pay the salary of any officer of the United States who used any time-measuring device for the purpose of ascertaining how long it took to perform a given task, or who used the information thus obtained in fixing the task of any workmen under his employ, or who paid or recommended payment of any bonus or premium.

Now we have at the opening of the present Congress not only a similar proposition, but the frank proposition that any officer of the Government who does these things shall be punished by fine and imprisonment, and if he undertakes to introduce into the service of the Government of the United States these so-called efficiency methods, which, known by this or that name, in accordance with some more or less prominent exponent of them, are nevertheless under no particular name used under the guiding direction of every thoughtful business man working in every establishment of the United States where men undertake by wise management to eliminate waste he shall be punished.

We find ourselves in a position in which we are about to face the most efficient, highly-trained and desperate competition that the American people were ever called upon to face, and we are to have efficiency in many American employments penalized by public example.

Now, finally, suppose that we had all the requisites for successful competition; that we have the raw ma-

terials; that we are efficient in our undertakings and have efficiently equipped our workmen for their tasks; that we are surrounding ourselves with the best machinery and applying to our operations the best contributions that science and invention can bring to our aid, we must finally have a market in which to dispose of our goods, and if we are to rely upon a domestic market, then we must have at hand all the instrumentalities of successful transportation, by which only can our raw materials be brought to the place of manufacture. But the very supplies upon which the life of every American community is dependent must be transported into our midst. The processes of production and distribution have become so complex that not only do many of our people fail to understand them, but they are prejudiced against the very instrumentalities by which that transportation is carried on, because they do not understand their function. There has been an overexcited popular suspicion against corporations, which in the minds of many men has had almost the force of an indictment. You will observe that the gentlemen who have been the most notable in stimulating this public suspicion have been the gentlemen who have discovered a very intimate, delicate and profitable relationship between compensation and agitation.

But the keeping in motion of production and distribution processes is essential to the preservation of American life. There is nothing that you or I can get by ourselves. Even our food supply is brought to our door. The supply of raw materials is brought to our factories by the continuous operation of transportation agencies and the continuous employment of men. The Government must protect us against every artificial and selfish effort to restrict the free flow of distribution agencies past our door, in order that we may take from it as from a few flowing rivers the things necessary for our support and for the continuous operation of the business which we are to operate. We must have to transport our raw materials these agencies of commerce. To insure that, we must be continually adding to the instrumentalities of commerce; we must be continually encouraging the conditions that will stimulate investment in transportation facilities. We must be taking care of our railroads and allowing them reasonable returns upon capital invested. We must encourage all those conditions under which their operation can be maintained uninterrupted by employer or by employee.

### Ocean Freight Rates Beat the Record.

Freight shipping rates, coastwise and overseas, at ports of the United States, are the highest ever experienced in this country in times of peace. Baltimore brokers are finding it difficult to obtain vessels at any price. Rates are quoted as usual, but even these record-breaking quotations are seldom adhered to, as there is a scramble among shippers for every available bottom, and the ships go to the highest bidders. The general situation is simply one of a diminished supply, caused by the war, and an augmented demand from the same cause.

The situation emphasizes the penalty this country is paying for its lack of a merchant marine. A deal of embarrassment might have been avoided had the United States merchant marine at the outbreak of the European war been carrying 65.2 per cent. of our exports and imports, as was done in 1861, or 81.7 per cent. 15 years earlier, in 1846, instead of the insignificant 8.6 per cent. of 1914.

The present quoted rate to Liverpool, England, on grain is 15s. 6d. a quarter (480 pounds), as against the normal of about 3s. 6d. a quarter, and that with the stipulation, when the carrier is a British vessel, as it almost invariably is now, that at least 50 per cent. of the cargo be wheat, although the demand for other commodities is greater. About the same ratio, or nearly five to one over the normal, holds for Scandinavian and French ports. The Italian rate has jumped from an average for the last 10 years of 3 to 4 shillings a quarter to 24 shillings. Schooners are frequently leaving Gulf ports with freight on lumber cargoes amounting to more than the value of the boats before the war, it is said.

An illustration of the situation is afforded in the case of the schooner Mary L. Baxter. She is on the way to Porto Rico, Hawaii, from Baltimore, with a cargo of coal, at \$3.87½ a ton, more than double the usual

rate of about \$1.70. On conclusion of the voyage she will make Tampa, Fla., in ballast and there load phosphate rock for Baltimore, at \$3.50 a ton.

Shipment of manganese ore from Rio de Janeiro, Brazil, has practically ceased, as the ships usually in that trade can go five days down the coast to the mouth of the River Plate and load grain for Europe at 135 to 140 shillings a ton, or over \$1 a bushel.

### UNITED STATES STEEL COMMON DIVIDEND, BASIS 5 PER CENT.

#### Greatest Prosperity in History of Corporation Shown by Report of Finances.

New York, January 25—[Special.]—Directors of the United States Steel Corporation have authorized the payment of a quarterly dividend of 1¼ per cent. on the \$508,000,000 of common stock.

This is at the rate of 5 per cent. a year, the same as prevailed before the outbreak of the war. The last previous payment on the common stock was one-half of 1 per cent., December 30, 1914.

After the meeting Judge Gary said: "Earnings for the last quarter of 1915, amounting to \$51,238,788, are \$5,729,084 larger than any previous quarter."

As usual, earnings were not made up until the day of the meeting of the board of directors.

The amount of cash in bank is about \$105,000,000.

The members of the finance committee and of the board of directors were all in favor of the declaration of the dividend on the common stock.

Net earnings of the Steel Corporation for the calendar year 1915 were \$130,351,290, an increase of \$58,690,149 compared with 1914.

The remarkable recovery in earnings of the Steel Corporation in the last 12 months was one of the sensational developments of the industrial revival in the United States. Steel output and steel prices have risen faster than ever before. Production is now establishing new high records, and the average price of leading steel products is now the highest ever established.

Within 12 months the financial position of the United States Steel Corporation has gone from deficit to prosperity. A year ago the income of the great Corporation was at its lowest tide. Earnings for the December quarter of 1914 were only \$10,935,635, or just \$40,297,153 less than the corresponding three months of 1915.

The entire membership of the finance committee was present, J. P. Morgan and H. C. Frick hastening back from the South to attend. W. A. EDWARDS.

### New Texas Sulphur Development.

An 80-acre sulphur property in West Texas will be developed by the Michigan Sulphur & Oil Co., chartered with \$300,000 capital and officers as follows: Eugene J. Russell, president; Ralph Eastman, secretary-treasurer; W. A. Doyle (formerly of Seattle), engineer and manager; all of Dallas. The deposit is located 10 miles from Orla, on the Santa Fe Railroad, and 41 miles northwest of Pecos. The company is constructing a road from the mines to Orla, has completed a telephone system, and will soon begin to receive 20 carloads of equipment, costing \$75,000. Plans provide for installing two cylinders, 32 feet long and 6 feet in diameter, each having a capacity of five to six carloads of ore. Steam at 250 to 280 pounds pressure will be forced into cylinders to melt the sulphur ore, the liquid emanating through perforations of cars into bottom of cylinders to be drawn off and molded into 100-pound cakes. These will be shipped to Eastern and Northern wood-pulp mills and rubber plants. The plant machinery is to include 200 horse-power boilers, using wood for fuel for a few weeks, and will then be converted into gas feeders, using natural gas. A dam will be built to conserve water from a watershed of 1,000,000 acres to supply the mining plant.

# The Needs of Our Railroads

INSTEAD OF HARRYING, GOVERNMENT SHOULD AID IN GREATEST POSSIBLE DEVELOPMENT OF USEFULNESS AND SERVICE.

"What American Railroads Need" is thoroughly and ably discussed in the *World's Work* for February by Otto H. Kahn, a New York banker of international training and experience, who came to the United States in 1893 and several years later became a member of the firm of Kuhn, Loeb & Co. of New York and the chief business associate of E. H. Harriman. Few people are better informed than Mr. Kahn concerning railroad questions, and he does not fail to blame railroads for their misdeeds where blame is deserved. In the course of his article he deprecates the superhuman task that has come to be piled up on the Interstate Commerce Commission, until it has become necessary to relegate the hearing and investigation of many important cases to clerks or agents; and, "with every desire on the part of the commissioners for the conscientious discharge of their duties, the views and conclusions arrived at by such subordinates must necessarily have a large if not a controlling influence on the decisions of the Commission."

The most serious grievance of the railroads, however, says Mr. Kahn, "is the fact that in addition to the activities of State Legislatures there are not less than 43 State commissions, exercising varying degrees of power over railroads, guided in their decisions by no precedents or fixed rules, their jurisdiction and their decrees intertwining, conflicting with, upsetting those of each other and of the Interstate Commerce Commission. \* \* \*

"In several cases the carrying out of suggestions made by the Interstate Commerce Commission to the railroads with the view to enabling them to obtain more adequate revenues was peremptorily stopped by State commissions which ordered the railroads not to do the very things which the Interstate Commerce Commission had told them they should do and had criticised them for not having done before. \* \* \*

"What with the regulating activities of 43 commissions besides the Interstate Commerce Commission, the adoption by State Legislatures of rate-fixing measures, extra crew bills, and all kinds of minute enactments (between 1912 and 1915 more than 4000 Federal and State bills affecting the railroads were introduced and more than 440 enacted), the enormous increase within the last seven years in Federal and State taxation, the steadily mounting cost of labor, the exactions of municipal and county authorities, etc., it will be admitted that the cup of railroad difficulties and grievances is full.

"I am far from holding the railroads blameless for some of the conditions with which they are now confronted. Not a few of them were arrogant in the days of their power, many mixed in politics, some forgot that, besides having a duty to their stockholders, they had a duty to the public; some were guilty of grievous and inexcusable financial misdeeds. But, in their natural resentment and their legitimate resolve to guard against similar conditions in the future, the people have overshot the mark. The proof of the pudding is in the eating. Not less than 82 railroads, comprising 41,988 miles and representing \$2,264,000,000 of capitalization, are in receivers' hands. The duration of receivership has become longer and longer, far longer than it used to be, owing to the difficulty of raising the necessary funds for the rehabilitation of the properties and for taking them out of receivers' hands, which difficulties are largely due to the complications and delays resulting from the jurisdiction and views of State commissions. \* \* \* Railroad construction has practically stopped, the purchases by railroads have been reduced to a minimum, so much so that, had it not been for the windfall of the 'war orders,' our steel and cognate industries would have faced an exceedingly serious situation. Railroad credit has become gravely affected. It is true that faults of management and disclosures of objectionable practices have been contributory causes in diminishing American railroad credit, but from my practical experience in dealing with investors I have no hesitation in affirming that the main reason for the multiplication of railroad bankruptcies and of the changed attitude of the public toward in-

vesting in railroad securities is to be found in the Federal and State legislation of the years from 1906 to 1912, and in what many investors considered the illiberal, narrow and frequently antagonistic spirit toward railroads of commissions charged with their supervision and control. \* \* \*

"Railroads, being essentially nation-wide in their functions, should, as to rates and other phases of their business directly or indirectly affecting interstate results, be placed under one national authority instead of being subject to the conflicting jurisdiction of many different States—a jurisdiction the exercise of which is always subject to the temptation of being used unfairly for the selfish and exclusive advantage of the respective individual States. \* \* \*

"It is vital to our railroads that investors be reassured and encouraged as to the safety and attractiveness of investment in American railroad securities, particularly also in view of the world-wide competition for capital which, sooner or later after the close of the European war, is likely to set in. A more liberal and helpful policy toward railroads should be inaugurated and a greater margin of net earnings secured than can be obtained under the existing rates in normal times; and in this connection it must be borne in mind that such margin must include a sum over and above what would be a reasonable dividend because the nature of the railroad business makes the accumulation of a substantial surplus a necessity for every properly managed line. A railroad can never be considered a finished product. Expenditures are continually required, and not a few of these outlays, such as for the elimination of grade crossings, better station buildings, etc., produce no direct revenue. \* \* \*

"The railroad question must be taken out of politics. The fortuitous and fortunate circumstances that, owing mainly to the direct and indirect effect of the stimulus of huge war orders and because of other unusual circumstances, railroads are doing much better at present, and that investors, after having left railroad securities more or less severely alone for years, are, for the time being, looking upon them with a friendly eye, should not make us lose sight of the underlying fact that the railroad industry is in an inherently weakened condition; that the spirit of enterprise has largely gone out of railroading; that construction has stopped; that only the absolutely necessary minimum is being spent for equipment, etc. Nor must the present prosperity of the country blind us to the consideration that the full measure of prosperity which it is capable of attaining, or, indeed, any permanent and comprehensive progress or prosperity cannot be reached as long as its most important industry, that of railroading, is bureaucratized, shackled, harassed and lamed.

"The present lopsided structure of railroad laws ought to be demolished and superseded by a new body of laws designed, not to punish the railroads, but to aid them toward the greatest development of usefulness and service to the country, conceived upon harmonious, carefully considered, scientific and permanent lines. The reform of our banking and currency laws having been carried into effect, for which the country owes a heavy debt of gratitude to President Wilson, the reconstruction of our railroad laws ranks amongst the most pressing and vitally needed reform in the economic affairs of the country. \* \* \*

"I know of no finer or more honorable body of men than the presidents of our American railroads. There is not one of them now in office who owes his position to inherited advantages, to protection, to anything, in fact, but his own qualities of mind and character. With few exceptions, the men in active charge of large businesses or corporations in this country have made their own positions; the vast majority started at or near the bottom of the ladder. There is no center in the world where the label counts less, where it is less possible to bequeath position, however backed by wealth, where the shine and effect of a great name is more quickly rubbed off if the bearer does not prove his worth, where the acid test of personal efficiency is more strictly applied, where strength and talent are more

certain to come to the top, than in the great mart of American business. And there is no country where the capacities of representatives of business are so little availed of in governmental and political affairs, their views so little heeded and so frequently rebuffed, where legislation affecting economic, industrial and financial matters is framed, and the resulting laws administered with such disregard of the counsel and expert knowledge of business men as in the United States. \* \* \*

"Is it too much to hope that our legislators and administrators will meet with broad, wide and dispassionate vision and action the new phase of economic development which is opening up before the American nation?"

## OPPRESSIVE DEMANDS OF LABOR.

Serious Menace to Prosperity of Railroads and the Country—Conciliatory Measures Not Likely to Be Adopted.

New York, January 25—[Special.]—The outlook for prospective trouble between the labor unions and the railroads is regarded with enough misgivings by Wall Street as to offset the daily reports of excellent earnings by the principal railway systems.

Continued heavy shipments of railway securities from London and Paris to be sold here add to the burden which the bankers must bear in financing American roads. Really phenomenal earnings are being recorded by many roads, but these fail of effect when confronted with the demands for higher wages and shorter hours.

Statements made officially on behalf of the roads indicate that conciliatory measures are not likely to be adopted. It is said for them that this, the first country-wide demand on the part of railway train service workers for higher wages, will cost the roads many millions of dollars.

Railroad pay envelopes absorb over 45 per cent. of the \$3,000,000,000 and more of gross revenue earned annually by the roads. Two-thirds of the total cost of operating is for labor.

Of the men in train service—engineers, firemen, conductors and trainmen—approximately 400,000 in number, it is said that they absorb now 28 per cent. of the payroll, but constitute only 19 per cent. of the total employees.

The owners of American railroads, the stockholders, number approximately 600,000. Their share of the gross earnings is less than 2 per cent., compared with the 45 per cent. paid employees. For every dollar paid to stockholders \$25 is paid to labor.

Bankers consider that the demands come inopportunistically. For the first time in a long period railroads are just re-establishing their credit through restoration of earning power. After a long spell of lean times and reduced expenditures for improvements, equipment and extensions, they are ready for construction programs.

To meet the new wage demands of the train service employees, it is maintained that the roads would have to reduce payments for interest and dividends, curtail betterment expenditures for non-productive improvements demanded by the public, or ask the Government to allow a proportionate increase in freight rates.

## Will Build Diesel Engines.

Referring to reports that the Newport News (Va.) Shipbuilding & Drydock Co. will build Diesel engines, H. L. Ferguson, president and general manager of that corporation, writes to the *MANUFACTURERS RECORD* as follows:

"We have acquired the right to build Werkspoor Diesel engines from the Nederlandsche Fabriek van Werktuigen en Spoorweg Materieel of the Werkspoor Works, Amsterdam, Holland. The Werkspoor type of engine is one of the most successful of the many internal combustion oil engines, and has been developed to a high state of efficiency by the above-mentioned company. We expect to engage in the building of these engines for marine work, both merchant and naval. We have not yet started the construction of any engines, nor have we any particular development plans except we desire to be able to meet the requirements of our customers for engines of any type."



# Commerce and Industry Thrive With Prosperity on the Farm

A GREAT WORK UNDERTAKEN BY THE BUSINESS MEN OF MEMPHIS—  
TEACHING THE FARMERS OF THE SECTION HOW TO  
LIVE AT HOME.

By C. M. CARROLL, Chicago, Ill.

A great work has taken form in the organization of a bureau of farm development of the Business Men's Club of Memphis, backed up by the farmers, bankers and merchants in 70 counties in Tennessee, Mississippi and Arkansas. These counties lie within the trade territory of Memphis, and Memphis is the home of the bureau.

Men of vision have come to realize that the opportunity of the town lies out in the country, hidden in the fertility of the soil.

These men are looking far beyond their immediate needs. The bigger vision follows the road that leads to the farm, out in the fields of growing corn and hay and cotton, for there lies the real prosperity of the people.

When the harvest fields smile towns wax fat and factories increase the payroll. Hay means beef and pork, which beckon the packing-house and storage plant. More corn means cereal mills, glucose factories. Flour mills locate in wheat-producing sections. Creameries follow the dairy cow, and the truck patch calls for the canning factory.

Those of the bigger vision realize, too, the obligations of citizenship and the real value of service, which mean that every man must do something to build up the community in which he lives or does business, aside from just the things he is required to do by law, or the things directly beneficial to himself.

The bureau was organized about three months ago. Boston and New York publications commented. The people felt encouraged.

H. M. Cottrell is the agricultural director of the bureau. He has made his life's work a study of plants and animals, food and feed. The constitution of the organization is to think and work, to jog the people, to lift some out of the rut, to put others on the track, to aid in working out the agricultural and commercial problems in the country around Memphis. Not to work them out alone, nor to tell others how to do it, but to work in accord with all of the people of the common interest of all. The business men declare that the work ahead of the bureau is not a work of charity, nor is it broadminded selfishness. No, just plain, common-sense duty applied to the operation of the farm and the factory and management of the home. The work of the bureau is with men, women and children, rich and poor alike. Bounteous crops are gratifying, but the bureau believes, too, that health is the foundation of efficiency, the framework of prosperity.

The bureau's first work was to apply common sense to its agricultural and commercial problems. Everybody got busy. Seventy counties were analyzed. The work was thorough, rapid and efficiently done; the results were astonishing. The bureau found that less than 15 counties out of 70 lying within 100 miles of Memphis, east, west and south, though rich in soil, produced food enough to supply the demands of the people living within their borders, and sufficient feed crops to maintain their farm animals; that these 70 counties had been and are now buying annually from Northern markets nearly \$300,000,000 worth of food and feed products, such as beef, pork, lard, milk, butter and cheese, poultry and eggs, flour and potatoes, canned fruits and vegetables, hay, oats, corn, meal, bran, horses and mules.

Reliable figures in the hands of the bureau show that the total deposits in all of the banks in Arkansas, Mississippi and Tennessee on July 1, 1915, amounted to less than \$300,000,000.

The bureau did not know whether this was much or little, so it selected Iowa, Wisconsin and Indiana, three Northern States, none of which have large cities, and compared their bank deposits with those of Arkansas, Mississippi and Tennessee. That comparison told an effective story. It showed that the bank deposits of Iowa alone are over \$551,000,000, Wisconsin nearly

\$360,000,000 and Indiana \$391,000,000. The bank deposits of any one of these Northern States proved to be greater than the bank deposits of all of the three Southern States combined.

The agents of the bureau went on investigating. New figures rolled in. It was learned from statistics gathered by the State Board of Education of North Carolina that the per capita wealth of Tennessee in 1914 was \$66, Arkansas \$51, Mississippi \$37, and that the average food consumption per capita in the rural communities of the South was about \$84. This proved

which read in part: "It required 10 bales of cotton, at 9 cents a pound, to purchase 200 bushels of sweet potatoes, and the potatoes can be produced on an acre of ground, while it required from 15 to 20 acres of land to produce the cotton."

The average county in the cotton belt States imported in 1914 food products to the amount of about \$1,000,000. Some of the exclusive cotton-growing counties bought foodstuffs in 1914 from outside markets to the amount of over \$3,000,000. As a basis, take the average county which imports a million dollars annually in food, feed and work animals, and see what it will do: That million dollars kept at home would build 25 consolidated schools at a cost of \$5000 each; 25 churches at \$2000 each; 100 miles of hard road at \$5000 a mile; pay the salaries of 2125 teachers for one year at \$1000 a year and the salaries of 25 preachers at 2000 a year, and still have left \$150,000 for live-stock, fences, buildings and paint.

What a mistake for a people to make! The South, with all her natural advantages—fertile soil, rain and sunshine, with her commercial, manufacturing and educational opportunities!

Excuse? The bureau could find none. There was no



EXPLAINING THE EVILS OF THE ONE-CROP SYSTEM FROM CHARTS PREPARED BY THE INTERNATIONAL HARVESTER CO.

that Tennessee fell short \$18 per capita of feeding herself, and that Arkansas lacked \$33, while Mississippi failed to feed her people to the extent of \$47 per capita. These figures showed further that the annual deficit in food production in Tennessee in 1914 was \$40,000,000, Arkansas \$51,000,000 and Mississippi \$85,000,000.

Statistics obtained from the same source showed that the farm wealth per capita in Tennessee in 1914 was \$380, Mississippi \$320, Arkansas \$324, Georgia \$325, Alabama \$230, Louisiana \$280, North Carolina \$322, South Carolina \$440, West Virginia \$365, Florida \$321.

The efficiency experts carried the investigation into the North to find that the average farm wealth per capita in Illinois in 1914 was \$2655 and in Iowa \$3386. It took the bureau off its feet when these figures were computed, for they found that the farm wealth per capita of these 10 Southern States all combined was less than the farm wealth per capita of the single State of Iowa. In other words, the wealth of a single farmer in Iowa, according to 1914 figures, was greater by \$72 than the wealth of 10 Southern farmers combined.

The bureau agents kept busy. According to the United States Census of 1910, there were 45,000 farms in Tennessee reporting no cows; Arkansas reported 52,000 farms without a milk cow, and 91,000 Mississippi farms in 1910 were dependent on the canning factory for milk.

Sweet potatoes are a staple crop in the South, yet millions of pounds of this product were purchased from Northern markets. The bureau sent out a circular,

excuse for the one-crop system, nor for buying food from Northern markets, nor for run-down farms, poor homes, bad roads and poor people—except mistakes, just mistakes.

To keep this money at home would mean a saving of more than \$10,000,000 to each county in less than 10 years' time.

It was time to act. A general call went forth. A meeting was held. Delegates came in from a hundred miles around. The figures were brought in, and, as figures always do, they spoke for themselves and the people understood.

Life is the business of living, and we are all business men. There was something wrong with the business system, and the only thing to do, it seemed, was to jog the system. There are dead systems and living systems. But a system, so they reasoned, which had stood still for 50 years while the world moved on should be superseded.

The bureau decided that it was not a matter of too much cotton; no, for the world must have cotton. But the whole trouble lay in the need of more food crops.

The habit of living out of tin cans and obtaining meat from the smokehouses of the North must be changed. This habit, which had become a part of the lives of people through years of practice, would be hard to change, but the tin-can habit must be put on the toboggan slide.

The idea of applying economic business principles to the farm was natural enough, but how to get these



ideas to the farm in a simple, practical way was the big task. The plan of work under consideration by the bureau carried with it the idea of enlisting the co-operation of every man, woman and child in 70 counties in western Tennessee, eastern Arkansas and central and northern Mississippi who really wanted to do something to better conditions, physically, spiritually, morally, intellectually and economically.

The work of Perry G. Holden, director of the agricultural extension department of the International Harvester Co., was called to the attention of the bureau. A committee was sent to Chicago to confer with Mr. Holden. The Harvester company agreed to help the bureau organize, plan and conduct a great campaign of education. The Harvester company agreed also to furnish experienced advance men to assist in the organization work, to provide 30 trained agricul-

Each county had its own organization. In over 1800 communities throughout the territory covered campaign committees were organized. More than 3000 men and women served on these committees and assisted in the work.

The people had responsibilities. The success of the campaign in each community depended upon the work put into it by the local people who must provide meals and lodging for the speakers and carry them into the small country settlements and to the farm homes where the meetings were scheduled. The farmers were not asked to come to town to hear the speakers. The campaign was carried to the people—to their homes, out in the fields of corn and cotton, into the schools to the boys and girls of today—the men and women of tomorrow.

Sixty speakers were on the job. These were divided

dollar that goes the farthest is the dollar that stays at home."

The South will feed herself and keep the dollar at home.

## A \$500,000 BAUXITE AND KAOLIN ENTERPRISE.

### Washington Capitalists Plan Big Development in Georgia.

The Columbia Kaolin & Aluminum Co., Washington, D. C., whose plans for developments in Wilkinson county, Georgia, were previously outlined by the MANUFACTURERS RECORD, is preparing to construct its plant. Richard K. Meade, Baltimore, has been engaged as the engineer in charge, and he sends the MANUFACTURERS RECORD particulars, including the following principal facts:

This company plans to spend ultimately about \$150,000 in development. A narrow-gauge railroad will be built connecting the clay and bauxite deposits, three miles from Gordon, with the latter. The mineral deposits comprise 4000 acres near Gordon, McIntyre and Irvington, Ga. This property contains large deposits of kaolin and bauxite, the formation being unusual, in that the bauxite lies on top of the kaolin. These deposits have been examined by Prof. Heinrich Riles of Cornell University, Richard K. Meade and Henry X. Hanna, president of the Product Sales Co. of Baltimore. Their reports are very favorable as to the quality of the clay and the low cost for which it can be prepared for the market. The company also owns a plant site near Gordon, on Central of Georgia Railway. Plants will be built here for drying bauxite and for washing and preparing clay for market, and for manufacture of alum. These plants will be modern, and concrete will be used wherever possible in their construction. Machinery will be electrically driven. Tunnel dryers employing waste steam will be used. The engineers have completed survey for the railroad. The survey for the railroad and the plans for the plant have been prepared by Richard K. Meade, chemical, mechanical and industrial engineer, Baltimore. He will also have general supervision of the construction of the plant and its operation for the first year. The daily output of the mines will be 100 tons kaolin, 50 tons bauxite and 5 tons alum. Only washing machinery, lumber, sand and gravel are to be purchased.



PHOTOGRAPH OF LAND EROSION, SHOWING CONDITION WHICH GOOD FERTILE LAND DEVELOPS INTO FROM ONE-CROP FARMING. ONCE A BEAUTIFUL FIELD, BUT NOW ABANDONED, AND IS LITERALLY WASHING AWAY.

tural lecturers, lecture charts and demonstration material for their use, and print 1,000,000 pieces of literature for free distribution in the form of booklets on diversified farming, cattle tick, hog cholera, livestock, poultry, gardens, canning, home economics, sanitation and other subjects dealing with the problems of the Cotton Belt States.

The first essential to success was the co-operation of the business interests in the 70 counties lying around Memphis. One hundred and forty Memphis business men offered their services to do this work. Two men visited each county. Every man was on the job. Meetings were called in every county. Seventy counties joined the campaign.

More help was needed. The bureau asked the railroads to join. J. C. Clair, agricultural commissioner of the Illinois Central Railway, turned over to campaign committee the services of the field men in his department. The Rock Island, Louisville & Nashville, Southern, Iron Mountain and New Orleans, Memphis & Chicago railroads all responded to the call. The agricultural and mechanical colleges, agricultural high schools of Arkansas and Mississippi, the Little Rock Chamber of Commerce, Memphis Rotary Club, Farmers' Union, Women's Nineteenth Century Club, West Tennessee Normal School, Cumberland Telephone Co., Western Newspaper Union, Progressive Farmer, Memphis Commercial-Appeal, News-Scimitar and many other influential interests in the South co-operated.

The profitable farming campaign was on. "We must feed ourselves and live at home" was the message. We must not buy from outside markets foodstuffs and feed which we can produce more economically at home. We must not fight grass to grow cotton to buy hay. We must have pastures, grow livestock, have something to sell every week in the year and keep the cotton money at home. We must let livestock do half the farming.

into three crews, 20 men in each crew. Each crew had a captain, who managed the details in the field.

It was a big job. Everybody worked. Great credit is due every member of the bureau of farm development.

The campaign was under the general supervision of George R. James, H. M. Cottrell and Chas. J. Haas of the bureau. W. R. Baughman of the Harvester company directed the details of the work.

Every move must fit into the plan. Sixty to one hundred meetings were held each day. The speakers went into the fields, tested soil, judged livestock, talked home-making, right living. Hundreds of letters came pouring into the bureau asking for advice. The people realized that a change of methods must come. A great work was started.

The success of the bureau will depend upon the work that follows.

Over 2000 meetings have been held in town and country. One hundred and seventy-five thousand people have heard the lectures.

The speakers and advance men have traveled 80,000 miles over railroads and nearly 40,000 miles in automobiles and buggies. In service and money the campaign has cost \$125,000. The bureau believes that this work will mark a new era in the agricultural and commercial history of the South. The benefits cannot be measured in terms of money. The message has been carried into hundreds of homes, into the hearts of the people.

The bureau will continue the work. An infant bureau of farm development will be born in every county within 100 miles of Memphis, east, west and south. These infant bureaus will teach the South how to feed herself and live at home.

This is the vision of a city.

Other cities will do well to follow the Memphis plan.

There was written in the pages of history a thousand years ago a fundamental principle which reads: "The

### Oil and Gas in Tennessee.

The January number of "The Resources of Tennessee," published by the State Geological Survey, contains several interesting articles, including "Oil and Gas Conditions in the Central Basin of Tennessee" and "Oil and Gas Conditions in the Reelfoot Lake District of Tennessee," both by A. H. Durdue, the State geologist, and "An Interesting Case of Spontaneous Combustion," by Paul C. Bowers.

A sketch is also given of the work done by the Geological Survey during 1915.

### The Cotton Movement.

In his report of January 21 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 174 days of the season was 8,398,871 bales, a decrease under the same period last year of 1,207,658 bales. The exports were 2,630,993 bales, a decrease of 673,861 bales. The takings were, by Northern spinners, 1,615,863 bales, a decrease of 10,299 bales; by Southern spinners, 2,287,024 bales, an increase of 422,244 bales.

The Maysville (Ky.) Cotton Mills will install additional machinery, costing \$25,000, for the manufacture of cotton twine, warp, clothesline, etc. Contract has been awarded for this new equipment, and it will be installed in a 116x70-foot three-story slow-burner mill-construction building which the company has completed. This building was previously mentioned as to be erected, J. E. Serrine of Greenville, S. C., being the architect-engineer and Harding & Simons of Maysville being the contractors.

## TEXAS' RIGID REGULATION OF SEWAGE DISPOSAL.

Every Incorporated Municipality Must Safeguard Streams From Pollution After End of This Year.

By HENRY E. ELROD, Consulting Engineer, Dallas, Tex.\*

The Thirty-third Legislature of the State of Texas enacted a law on March 27, 1913, forbidding the pollution of streams, or other public bodies of water, by the discharge of sewage, or other matter, into such public bodies of water. A period of three years, commencing 90 days after the adjournment of the Legislature (April 1, 1913) was given for compliance with the provisions of the law. This period of grace would have expired on July 1 of this year, 1916, but for the fact that an extension of the specified time was prayed of the Thirty-fourth Legislature by the city of Waco and was accordingly granted, the date being moved up to January 1, 1917.

The law affects every incorporated municipality in the State with the exception of those cities on the Gulf coast which discharge their sewage into the tidewaters of the Gulf, bays and bayous, and those cities already having adequate sewage treatment or disposal plants in operation.

There are in Texas 99 municipalities of 2500 inhabitants or more. Four of these, San Antonio, Dallas, Fort Worth and Houston, have more than 100,000 inhabitants; 5 cities, El Paso, Galveston, Austin, Waco, Beaumont, have more than 20,000 each; 13 cities, Laredo, Brownsville, Denison, Sherman, Marshall, Paris, Corpus Christi, Temple, Tyler, Palestine, Cleburne and Amarillo, have 10,000 or more inhabitants each; 20 cities have more than 5000 inhabitants each; 55 cities have 2500 or more inhabitants; 225 cities have less than 2500 inhabitants each.

All of the largest four cities have adequate sewage-disposal systems in operation or have taken necessary steps to provide same.

San Antonio discharges its sewage into a municipally-owned lake, the water of which is used for irrigation purposes. Dallas is now constructing a modern sewage-disposal plant at a cost of, including interceptors, force mains and pumping plant, approximately \$550,000.

Fort Worth has had the necessary survey and recommendations made for a modern plant, including sewer extensions, to cost \$782,000.

Houston has a bond issue of \$1,000,000 with which to extend the sewers and build a modern disposal plant. Mr. E. E. Sands, engineer for the city of Houston, has made extensive experiments with the new "activated sludge" system of sewage treatment for the purpose of installing a plant of this character for the city. Houston has a coke bed filter plant, but it is inadequate and uneconomical, and will be abandoned, it is reported.

Of the next group of cities, Austin, the capital of the State, has had surveys and recommendations made for the installation of a modern system of sewage disposal to cost approximately \$500,000. Beaumont is at tidewater, and is not affected by the provisions of the law. El Paso discharges its sewage upon the desert, 3.4 miles from the city, through a corrugated steel pipe, recently laid at an expense of \$80,000. Galveston is at tidewater, and does not come within the scope of the law.

Waco recently held an election for the issuance of \$100,000 of bonds for the purpose of installing a modern sewage-disposal plant, etc., but the issue was defeated by a large majority. The city's sewage—2,500,000 to 3,000,000 gallons per day—is discharged directly into the Brazos River.

Of the third group Temple, Tyler, Sherman, Paris, Palestine and Cleburne either have plants in operation or have taken the necessary steps to provide them. Corpus Christi is at tidewater; hence does not need a plant.

San Marcos, a city of about 5000 inhabitants, enjoys the distinction of being the first Texas city to definitely adopt the "activated sludge" system of sewage

treatment, and the results obtained there will be watched with much interest.

Of the remaining 300 municipalities, a few have taken steps to provide adequate means of sewage disposal, but the large majority of such cities have done nothing toward complying with the law, and these cities are likely to find themselves in an embarrassing position on January 1, 1917. In an interview with Senator J. C. McNealus of Dallas, author of the law, he expressed the belief, based upon conversations with State Board of Health officials, that the penalties for non-compliance with the law will be rigidly enforced, and that whatever steps are necessary will be taken to prevent the further pollution of streams on and after January 1, 1917. It is not unlikely that a great many sewer outlets which discharge sewage into streams will be sealed, as was ordered done in the State of Kansas by the Kansas State Board of Health in June, 1914, under similar circumstances.

The University of Texas, through its Bureau of Municipal Research, has accomplished much good by the issuance of bulletins dealing with the problems of sewage disposal as applicable to Texas towns and cities. It is to be regretted that these bulletins have only a limited circulation.

Mr. V. M. Ehlers, State sanitary engineer, has done much excellent work among the cities of the State in stimulating them to action and helping them with plans for properly complying with the provisions of the law. Municipalities may avail themselves of Mr. Ehler's expert advice free of charge by addressing him at Austin, care State Board of Health.

## MUCH ACTIVITY AT FAIRMONT.

Street Improvements, Bridges and Road Construction and Many Building Operations.

Fairmont W. Va., January 20.—[Special.]—Construction improvements seem to be of never-ending continuity in Fairmont. The city has just completed, after two years' work, 23 miles of paving of the city streets and roads leading into them, at a total cost of \$500,000.

Now comes the announcement that an election will be held in March or thereabouts to vote \$500,000, to be spent (if the issue carries, and the assurances are that it will) in the construction of two concrete bridges and the extension of sewers and streets. About \$400,000, it is proposed, will be spent for the bridges, and the remaining \$100,000 for streets and sewers.

There is also great activity in building operations. The administration building, and the first of a group that will form the State Normal School here, is now in course of construction. It is to cost, when completed by the contractor, J. L. Crouse of Greensboro, N. C., approximately \$130,000. The rest of the group is to be completed within the next two years.

Plans of competing architects will be considered on January 25 from which "The Fairmont," the city's proposed new hotel, will be constructed. Stock to the extent of \$350,000 has been subscribed by the local business men; \$250,000 will be spent for the building, leaving \$100,000 for the site and furnishings. The Fairmont Chamber of Commerce has been the active champion of this project, and is credited with having brought it up to the present successful stage.

The congregation of the First Presbyterian Church is having plans prepared for a modern edifice to be constructed this spring. It will cost approximately \$30,000.

The Central District Telephone Co., which has just consolidated with the local independent telephone company, will erect a new exchange building, to cost, with such equipment not included in the switchboards, \$140,000. Improvements in connection with the building will include the laying of underground cables, the elimination of telephone poles in the business section and adoption of the independent equipment to that of the new. There have been two telephone companies in the West Virginia field, but a recent deal will mean that the Bell company will soon serve the community exclusively. The new building will be three stories, 41x48 feet in dimensions, fireproof construction.

## CEMENT INTERESTS TO GATHER AT CHICAGO.

Features of Annual Cement Show and Meetings of Concrete Organizations to Be Held Next Month.

The annual Chicago Cement Show, looked forward to as the biggest event of the year by those interested in all phases of the uses of cement and concreting machinery and supplies, will be held February 12 to 19.

To the big Coliseum, which houses this annual exhibit, the exhibit space of the hall of the First Infantry Regiment, close by, will be joined by covered passageways. Practically every booth in both halls has been taken for the exhibits.

The outstanding feature of this year's Show will be the varied display of concrete products. Nearly every exhibitor, in addition to showing his wares, will display some character of products made with his equipment or material.

It is certain, therefore, that the architects and the builders, as well as the general public, who attend the Show this year will find it more interesting than it ever has been before.

Concrete has become the standard in many phases of engineering work, and in a multitude of other fields its use is recognized as in harmony with the best practices. But the possibilities of concrete for decorative purposes have heretofore been subordinated to its wider use in actual construction. The purpose, therefore, of the display of concrete products at this year's Show is to demonstrate that concrete can be used logically for beauty as well as for strength.

An especially interesting exhibit along this line will be that of the cement manufacturers. At previous shows the manufacturers have had individual exhibits. This year they have a joint one, which will contain samples of an exceptionally wide variety of concrete surfaces. The walls are large enough in this exhibit to show the appearance of concrete in large areas, full-sized duplicates of the balustrade in Grant Park to show architectural design, carved decorative panels from the Hollenden Hotel in Cleveland, the building stone so widely used in the East, and concrete simulating the finest of granites and marbles will be the features of the joint exhibit which will interest architects. An effort will also be made to instruct visiting builders in modern treatments of concrete surfaces.

Another important feature of the joint exhibit will be the road display. The United States Government road models which were exhibited at the Panama-Pacific Exposition will be a feature of the concrete road division which should prove interesting to road builders. Full-size pavement sections built to show road inspectors and contractors the errors of construction to be avoided will be well worthy of careful study.

One section of the joint exhibit will be devoted to good vs. bad concrete. A 200-pound testing machine and other laboratory apparatus will be used to show that graded materials are more economical and make better concrete than bank run aggregates.

Contractors and builders who visit the Show to study equipment, however, will have ample opportunity to investigate the standard machines of the industry. More comprehensive displays of equipment are possible because of the greater amount of display space which the armory offers. Concrete mixers, block and brick machines, engines, pumps, hoists, crushers, forms of monolithic concrete, machines for sewer pipe and drain tile, road building and contractors' equipment will be shown in greater number and variety than last year.

Several important meetings of organizations devoted to concrete design and construction will be held during Show week. These include the American Concrete Institute, which meets at the Auditorium Hotel February 14 to 17, and the Second National Conference on Concrete Road Building, which also will be at the Auditorium February 15 to 18. Other meetings include the Association of Municipal Building Inspectors, February 14 and 15, and the American Concrete Pipe Association.

The program of the American Concrete Institute, as well as other associations, provides for papers on a wide range of important subjects relating to the uses of cement, and the discussions which always follow enable those desiring to keep in touch with the best practices in different lines to thus acquaint themselves with what is being done.

\*Mr. Elrod is a member of the American Society of Civil Engineers, the American Society of Mechanical Engineers and the American Academy of Political and Social Sciences.



# News and Views from Our Readers

## What Energy and Intelligence Can Do in South Mississippi.

CHARLES E. CHIDSEY, Pascagoula, Miss.

I have just read with much interest the letter of the editor from Daytona, Fla., in which he shows how Flagler capitalized the climate of Florida.

The climate of Southeast Mississippi is one of its greatest assets; in fact, it is the capital of this section, which is now being made productive. In the halcyon days of "long befo' de wah" this section was famous as a winter and summer resort, where the wealth of the South congregated to spend their leisure, and possibly it was visited by Longfellow on his return from his second stay in Europe, for in his "Building of the Ship" he says:

Covering many a rood of ground,  
Lay the timber piled around;  
Brought from regions far away,  
From Pascagoula's sunny bay.

That glory departed, but a new era has dawned. The assets are now not alone the sea and sky, but its climate, which is inducing the hardy sons of the North to come here and turn its barren pine meadows into orchards of pecans and citrus fruits and also into truck gardens and for small fruits, such as strawberries, dewberries and blackberries.

This immediate section is the home of the paper-shell pecan, and here originated the greatest pecans that are now on the market. On a piece of land at South Pascagoula, on the shores of the Mississippi Sound, and which was not more than half an acre in extent, were born the Stewart, Delmas and Schley pecans, that are producing a silent but effective revolution in the South—a revolution that makes for the peace and happiness of millions yet to be.

The pecan industry of this immediate section is hardly more than 20 years old, as it was about that long ago when the Schley, Delmas and Success pecans were discovered, and yet during the season now on there was shipped from this point 380,000 pounds, or 16 carloads of pecans, and also 12 carloads of Satsuma oranges and grapefruit, the citrus fruit industry being only about 10 years old. These figures do not include the immense quantity of nursery stock also shipped from here, and of which we have no adequate figures. What is needed here is men of thrift and industry, who can and will take hold of the idle capital, the climate of Southeast Mississippi, and make it productive.

As an illustration of what I mean I will briefly call attention to the work done in this vicinity by a Belgian, who came here about 10 years ago from Illinois in order to escape the chilly blast of the Northern winters. Just outside the city limits he has 12 acres of land, which before he settled upon it was what is known in local parlance as "crayfish land," from the number of crayfish chimneys seen upon it, and which is generally wet and unfit for cultivation in its natural state, and as the natives say, "so poor you can't even raise a fuss on it." This Belgian had his land cleared, thoroughly drained with deep ditches and planted in an orchard of citrus fruit, utilizing the land between the trees even up to their trunks for truck growing. Today it is one of the showplaces of the city.

I visited him the week before Christmas, and found his citrus fruit trees bending low to the ground with their weight of golden fruit, while the strawberries were just putting out their blossoms. Only a few weeks before he had gathered from seven acres 1400 bushels of sweet potatoes that would average 50 cents per bushel, the largest tubers being sold in the local market and the smaller being fed to hogs, making fine pork, which was disposed of to local butchers. There were several acres of cauliflower and cabbage, almost ready for the market, and besides there were carrots, turnips, ruta baga and onions, the deep, luscious green of the leaves of the plants telling of the health and vigor of the plants and the fertility of the soil. No fertilizer was used save that which came from the stables.

One could stand in this field of luxuriant beauty and look across the wire fence into the barren meadows out of which this scene of wealth and beauty had been

made. The transformation had been wrought by thrift and industry. This man's success is due to the fact that he had taken hold of the common capital of the South and made it work, making it productive, while others let it lie idle.

The attitude of the old South toward its capital is like that of a sheep farmer in one of the piney woods counties, who had a "right smart of sheep" and was telling me how he pursued the methods of his fathers and let his sheep wander over the woods and make a living as well as they could, while his wife had taken a piece of land, cleared and fenced it and made of it a pasture and furnished the sheep with sheds for wet and cold weather, "and when the lambs are dropped in the spring she has the ewes carefully housed, the lambs taken care of, and don't you know she saves about 100 per cent. of her lambs?"

"How many do you save?" I queried.

"Oh, about 30 or 40 per cent."

"Don't you think," I asked, "it would be better to follow your wife's method of husbandry and save 100 per cent. of your lambs?"

"Look, ee here, Jedge," he drawled, "the man that wants to save 100 per cent. of his lambs is a damn hawg."

## Information Wanted About Bleaching of Cotton Linters.

F. S. HUNT, Manager Home Oil Mill, New Decatur, Alabama.

The linter production end of the cottonseed-oil mill business has within the last several months reached such proportions, owing to the unusual conditions which obtain just at present, that we feel that there are some features of it which we, as manufacturers, should be better posted on.

We are presuming to ask what information you might be in position to offer us in connection with the bleaching of linters.

We do not seem to be able to get very much information along this line. We only know that linters are bleached as a preliminary step looking toward other uses, and it occurred to us that you might be in possession of information which would be interesting to us. Also that perhaps you might give us the names of other parties from whom we might request detailed information.

## A Clearing-House of Manufacturing Information Suggested.

LOUIS A. FREEDMAN, Manager Technology Sales Co., Inc., New York.

We are in the market for a variety of products, chemicals, metals, both raw materials and manufactured, and are having the greatest difficulty in finding sources of supply. In connection with the campaign for "Preparedness" which you are carrying on, various propositions have been suggested for the tabulating of the country's resources in such a way that the nation would know where to put its hands on the things it needs the moment it needs them. Such a tabulation of resources, however, is at least as important for the daily business needs of this country as for its emergency needs.

The Bureau of Foreign and Domestic Commerce would seem the natural center of information of this kind, but unfortunately it is handicapped by the difficulties under which all Government institutions labor.

Such a tabulation, therefore, like so many other things in our country, must be left to private initiative. We would suggest the following:

That a central clearing-house for all trade papers be established for cataloguing manufacturers and their products throughout the country. This should be absolutely a non-business enterprise, in the sense that all manufacturers of any products whatsoever, whether or not they advertise, will be listed. Such a compilation will naturally be kept up to date and will have an enormous advantage over trade directories, which are a year or more behind the times.

Possibly a small fee may be charged for information

given or eventually subscriptions may be bought for the annual service of such a bureau.

Trade papers, being business enterprises, naturally favor their advertisers. Such a central bureau, however, should make no distinction between advertising manufacturers and others. The idea is evidently that by rendering service both to the sellers and to the buyers the interests of both will be stimulated with resulting improvement in business, which could not fail then to benefit also the trade papers.

The MANUFACTURERS RECORD, having taken the lead in such a broad and patriotic way in a movement which has the fullest endorsement of American citizens brought up in the best traditions, will, we hope, find the plan we suggest, or some other plan which may be more practical for the same purpose, worthy of its support.

## Peanut Oil Industry Interests South Georgia Cotton Growers.

H. E. WATKINS, Vice-President and Treasurer, Empire Cotton Oil Co., Atlanta, Ga.

Some time ago we received a marked copy of your paper calling attention to an article on the peanut industry, which described the process of manufacturing peanuts, pressing from the nuts a product commonly known as peanut oil, and going somewhat into detail in regard to this process.

We are interesting ourselves, endeavoring to get all the information we can concerning this industry, looking to the possible necessity of having to enter somewhat into the business in Southwest Georgia, brought about by the invasion of the boll-weevil, which will necessarily restrict the production of cotton, and we would appreciate very much indeed your giving us further information in the matter. We would also appreciate your giving us the names of concerns that manufacture machinery suitable for that purpose, likewise the names and addresses of concerns manufacturing peanut products.

## Big Drainage Operations in Arkansas Under Easily Understood Laws.

JAS. GOULD, Pine Bluff, Ark.

On page 48 of your valued paper of January 13, 1916, there is an article headed "Drainage Potentialities in the South." The writer of that letter shows such a woful lack of knowledge on the subject he writes on, that is, in so far as the State of Arkansas goes, that I am assuming he knows nothing about the subject except as it pertains to his own State, North Carolina.

The gentleman does not, in his article, refer to Louisiana, Texas or Arkansas. A man should not ever undertake to discuss a matter of as much interest or importance as that of drainage of the wet lands of the South without at least being fairly well informed. Any man who pretends to know anything of the South should know that all of the three States above mentioned have within the past few years reclaimed millions of acres of wet lands, lands that are now in a high state of cultivation, producing maximum crops and making the owners rich. But, Mr. Editor, let each State answer this article or not, as they see fit. I am after his scalp for traducing or misrepresenting my State by not even mentioning it in his article.

I do not pretend to know what North Carolina has done in the way of drainage, but believe that if she has done only one-half of what we have in Arkansas in the way of reclaiming wet lands in the last 10 years she must have drained her entire Commonwealth. There have been over 1,000,000 acres of land reclaimed in Southeast Arkansas within the last three years, the richest lands in the South. There are in this county alone eight separate drainage districts. I think I would be safe in saying that in the counties of Clay, Independence, Jackson, Lawrence, Green, Poinsett, Mississippi, Crittenden, Arkansas, Lonoke, Jefferson, Lincoln, Desha, Chicot and Ashley there has been thoroughly drained and reclaimed over 4,000,000 acres of land, to say nothing of the other counties in the State.



many of which have more than this amount of lands reclaimed.

The writer of the letter shows much lack of information and knowledge on the law of drainage, so far as Arkansas goes. We have in this State what is known as the general drainage law, passed in 1909, a law that is admitted to be one of the best in the United States on this line. Such well-known bond attorneys as Kraft, Wood & Oakley of Chicago, Dillon & Thompson of New York city, Squire, Sanders & Dempsey of Cleveland and Judge G. B. Rose of Little Rock, Ark., have approved bonds for these districts, which find a ready market at top prices in all of the cities of this land.

The organization of drainage districts under the old law was cumbersome and hard to follow, but under the new law a negro lawyer would be disqualified for incompetency if he could not organize a district, have the bonds sold and let the contract within 90 days after the first proceedings.

If the gentleman is having such a hard time, even in his own State, to organize drainage districts and reclaim his wet lands, I would suggest that he come to Arkansas for a few days and we will let him in on the ground floor of real progressiveness and prosperity as the result of drainage and reclaiming lands in this State.

### Prosperity Has Come to Slidell.

A. JULES BENEDIC, New Orleans, La.

No better example of true prosperity is found than in a recent newspaper item from Slidell, La., a small town about 60 miles from New Orleans on the New Orleans & Great Northern Railroad. It reads:

"The new year has come to Slidell with about \$100,000 worth of improvements assured for the town for the new year. All manufacturing plants are going full capacity, and with plenty of orders on hand.

"The Salem Brick & Lumber Co. will give the town a brand-new and modern sawmill. The Southern Creosoting Co. contemplates making improvements and the Forest Products Co. has nearly completed extensive additions to its large plant.

"The Slidell Drydock & Shipbuilding Co. has several contracts for vessels, and is making additions of new machinery.

"The parish banks have \$1,000,000 on deposit. No mercantile failures were reported last year.

"Three carloads of automobiles have been sold in Slidell this winter, and another carload is expected this month.

"The Slidell Savings and Homestead Association reports activities on a number of loans, and new residences are a matter of almost daily construction."

This certainly is a splendid and optimistic report from a Louisiana town that only a few years ago was a lumber camp.

### Most Significant Map.

A. J. JEFFERS, in Virginian-Pilot, Norfolk, Va.

In the issue of the MANUFACTURERS RECORD of date December 23 appears a map with very significant features shown thereon.

Everyone who has ever read the MANUFACTURERS RECORD for any length of time knows that the sensational and the theoretical is a stranger to its columns. Its pages are therefore entitled to careful perusal and its carefully prepared and digested conclusions given due consideration.

The map alone is an eye-opener. The features outlined thereon, even without a word of explanation, impress themselves most forcibly and emphatically upon the mind of every thoughtful reader.

It is the unexpected that generally happens that catches individuals or nations napping. A glance at that map at once brings to the mind the thought,

Suppose that at some future date the unexpected should happen, and that John Bull should take a hand at the United States for some reason or cause, growing out of the present world mix-up; out of Uncle Sam's desire to be entirely neutral; or suppose that the Central powers in Europe win out over the Allies and the shadow of a military despotism, the greatest the modern

world has ever seen, should hover over Canada, business on the Great Lakes and river systems along the northern border of the United States would at once be paralyzed, even though no invading footprints were made this side of the border.

A careful study of such a map, and the logical reasoning in connection therewith, should convince every thoughtful man of the advisability of hedging at least to a fair extent against eventualities, exigencies and possibilities. The steel, iron and munition men of the country should take active interest in protecting their respective industries against the possibility of danger from the outside, seeing that it is so extremely hard to handle and muzzle the few foes within.

Statesmanship instead of partisanship is needed in Congress as much as it ever was in the history of the country. Pigny peacemakers cut but a sorry figure with nations or individuals strong enough to tear up treaties and agreements. The sinews of war in the territory of Uncle Sam should not be too carelessly exposed to the rapacity or cupidity of those nations whose motto or at least whose course of action seems to be based upon the "might makes right" basis.

The facts, figures and features brought out by the MANUFACTURERS RECORD, by means of this map, and otherwise, make good reading for all loyal American citizens.

### Aggressive Plans for Industrial Development of San Antonio.

O. L. RASH, South San Antonio Industrial Co., San Antonio, Tex.

San Antonio citizens are starting the new year with a new slogan, which is being backed up by an organization composed of 40 leading business men. The slogan is: "Lengthen the Dinner Pail Procession." This organization, the South San Antonio Industrial Co., is going after the proposition with a vim along practical lines that are sure to produce results.

The inspiration came from the movement of the International & Great Northern shops to the new site south of the city, where it is planned to double their capacity and employ about 500 men. This association of business men having suffered the long-felt want of some means whereby free industrial sites and other inducements could be offered, got into the collar and subscribed a fund sufficient to cover the purchase of 550 acres of land adjoining the International & Great Northern plant to be used for the specific purpose of encouraging industrial development.

They have gone further; they have employed an industrial agent, who will devote his time exclusively to obtaining several much-needed manufacturing industries. An extensive advertising campaign will be conducted in search of such manufacturing enterprises as will prove profitable. None but those of a substantial character will be entertained.

The International & Great Northern will break ground for their new plant about January 15, and work will be rushed to completion at the earliest possible date. This move will establish a new community in San Antonio, as all employees will move to a location near the shops.

### Wants Cotton Bags.

H. E. PRICE, Superintendent Lake County Clay Co., Okahumpka, Fla.

Can you refer us to anyone in the South who makes a good cotton bag that will hold about 200 pounds of clay, and that can be used for two or three shipments? We use a large number of bags every year, and the cost runs into the thousands, not only with this company, but three other companies that the above offices control.

At present we are using Italian tale, German and Austrian bags. Why let the foreigner have this money if we can be supplied with home product just as good and reasonable?

### Activity of Farmers in a Mississippi County.

O. P. McPHERSON, Gloster, Miss.

Among the most noted improvements of this, the southwestern part of Mississippi, is the activity of the farmers and real estate men. Amite county will come

to the front with one of the largest acreages in cotton that has been shown in this section in a number of years, and with this increase in cotton the acreage in all other products will not be materially reduced. Gloster has marketed about 12 carloads of hogs this fall. More than \$50,000 has been paid in Amite county for peanuts. The corn yield was exceedingly good last year, with a record-breaking yield in sweet potatoes. The return of labor from the delta plantations has been very noticeable, and many negroes who left here in the early days of the boll-weevil have returned and resumed cotton growing in this section. Real estate has advanced about 25 per cent. during the past six months. Many farmers from the North have located here. Money is getting easy, and many capitalists are making long-term loans on Amite county lands. Amite county is erecting an agricultural high school at Liberty, Miss. Good roads are being agitated throughout the entire county. An active interest is being manifested in the timbered lands of this section. The extreme mild winter is proving of great advantage to all cattle raisers.

### Does Our Critic Uphold Deliberate Cold-Blooded Murder of Women and Children? If so, Argument With Him Is Useless—We Simply Expressed Our Views of Murder.

W. HOLLINDER, Fort Worth, Tex.

The editorial at the head of the first column of the first page of the MANUFACTURERS RECORD of January 6, 1916, by the violence and intemperateness of its phrasing, vitiates the effect of every editorial utterance which has ever appeared or may ever after appear in that publication.

To denounce Germany at present, without qualification, evidences a shallow mind and loose thinking.

To my mind, the writer of an article of the tone of that above referred to shows contemptible cowardice in not giving up his comfortable office job in Baltimore, Md., and enlisting in the allied forces, where he could offer his life in support of his convictions, as so many noble men on both sides have been proud to do. Physical disability alone should keep this swivel-chair warrior from the front.

When undesirable citizens are spoken of in the future the writer of that hysteric, unsigned article will occur to me as a splendid example of the breed.

This is the first time that I, a great lover of good reading, ever wrote to a publication on anything but strict business, and I know it to be time wasted. However, such vicious utterances in a reputable journal deserve condemnation from any American citizen who may see them.

### Mr. Jacob Lubowsky Has Ceased to Love Us and Desires to Injure Us.

JACOB LUBOWSKY, 211 N. Chester St., Baltimore, Md.

Referring to your political senseless article against Germany and Germans of January 6, I ask you if you expect in future to call your scrap of paper a commercial journal.

Whoever wrote this article has not a bit of sense and does not know anything else but a low kind of language, as he used there.

Any editor in the world would shame himself to use such illbred words, unless he is compensated by the English Government.

I will visit in the next few days my business friends in Baltimore and call their attention to your commercial-political paper.

### An Educator of Wide-Awake Business Men.

J. D. WYRICK, Manager Colonial Lumber Co., Bearden, Tenn.

The MANUFACTURERS RECORD is in my mind the most valuable trade journal published in the United States of America, and I consider it an educator for the wide-awake business man.

## ANOTHER EXPANSION OF TEXAS COMPANY.

Twenty Per Cent. Stock Increase—Will Engage in Shipbuilding—A Romance of Trade.

Interesting announcement is made that the Texas Company, one of the most phenomenally successful oil companies in the country, proposes a 20 per cent. increase of capital stock. This will give a total of capital stock outstanding of 444,000 shares, par value of which, at \$100, making a total of \$44,400,000 par value. The old stock is now selling in the market at from 205 to 210. The announcement is also made that the company has leased the Sewell shipyards of Bath, Maine, for a term of years, and that, in addition to plans for building several tank steamers at those yards, the Newport News Shipbuilding & Drydock Co. is now engaged in turning out four vessels for the Texas Company. The Sewell shipyards at Bath have been out of commission for some years. With overhauling they will be made one of the greatest yards for the building of sailing vessels which the country contains.

The Texas Company has been increasing its pipe-line facilities by doubling them in instances and putting in loops. The company's main line reaches from the Oklahoma fields to Port Arthur, Tex. With its increased facilities the Texas Company will be in position to become one of the greatest export companies in the country. It already has built up a large export business, and for years has had ocean and export terminals at Port Arthur, New Orleans, New York, Philadelphia, Baltimore, Providence, and in Europe. It owns, in addition to extensive pipe-line systems, tank cars and other equipment to handle business and make available for its refineries the oil production of the Texas, Louisiana and Oklahoma fields, and it has built or acquired an extensive fleet of oil-carrying vessels to take care of coastwise and export trade.

The development of the Texas Company is one of the romances of the petroleum industry. Following the discovery of oil at Spindletop in January, 1901, the Texas Fuel Co. was organized by citizens of Corsicana, Tex.—oil men who had had a successful experience with oil development in the Corsicana field. The capital stock of the company was \$50,000. Within a year a reorganization of the company occurred, under the name of the Texas Company, with capital stock of \$3,000,000. With the proceeds of the sale of this stock the refinery and ocean terminals were built at Port Arthur, Tex. John W. Gates became interested in the company, and the expansion of the company has continued to this day. There was an increase in capital stock in 1904 of \$3,000,000, and the capital stock was again doubled in 1907, making it \$12,000,000. In the latter part of 1908, \$6,000,000 more was added, and from \$18,000,000 increases have occurred until the present time, when the capitalization has almost reached \$50,000,000.

### Textile Notes.

It is reported that the Thread Mills Co., Spray, N. C., will build a knitting mill at Leakesville, N. C.

H. F. Young and associates, Shelby, N. C., plan the organization of a \$50,000 company to build a knitting mill.

Twenty additional new looms for weaving extra heavy army duck will be installed by the Equinox Mills, Anderson, S. C. They have been ordered.

An electric motor will be installed by the Dixie Knitting Mill, Forest City, N. C., and electric power will succeed steam power in the plant.

Russell Manufacturing Co., Alexander City, Ala., will build an addition and install 2000 spindles for the production of hosiery yarns.

A. J. Henderson and associates, Hampton, Ga., have incorporated the Henderson Manufacturing Co., with capital of \$200,000, for manufacturing cotton goods.

The Moutala Manufacturing Co., Montgomery, Ala., will install carding and spinning machinery and change its weaving to automatic looms. It has ordered this machinery.

A picker-room addition will be built by the Florence Cotton Mills, Forest City, N. C. Its machinery instal-

lation will include a 35 horse-power electric motor and pickers with automatic feeders.

The O. K. Knitting Mills, New Orleans, will add three sections of automatic power knitting machines, a pressing machine and a brushing machine. This new equipment has been ordered.

A. C. Randall of East St. Louis, Ill.; Philip G. Lauff of Granite City, Ill., and associates have incorporated the American Gauze & Cotton Co. of St. Louis. This company is capitalized at \$7500, and will manufacture surgical gauze.

The Hawthorn Spinning Mills, Clover, S. C., will construct a 500x127-foot building and equip it with yarn-spinning machinery. This company was mentioned January 20 as incorporated by M. L. Smith and associates, the capital being \$500,000.

C. E. Hutchison (president of Woodlawn Manufacturing Co. and other cotton manufacturing companies) and associates will build a cotton-yarn mill, but have not determined details. They were reported recently as to build a mill at Mt. Holly, N. C.

The Millner Manufacturing Co., Statesville, N. C., lately noted incorporated with \$125,000, will not now build mill. Its equipment of machinery (for which contract was awarded) will be installed by the Statesville Cotton Mills, of which J. W. Kaneer (one of the Millner organizers) is superintendent.

A 100-foot extension will be built by the Brookford (N. C.) Mills Manufacturing Co. (A. D. Julliard & Co. of New York), and the contract has been awarded to John Deal of Brookford. On the first floor there will be installed 100 additional looms, and the second floor will be equipped as a clothroom.

## WORKING FOR NATIONAL DEFENSE.

The Paramount Necessity for Preparedness the Keynote of National Security Congress.

Men of National note, with diverging views on politics, met at Washington last week in the sessions of the National Security Congress and united on plans of national defense. The meeting was held under the auspices of the National Security League, and there was a notable program of speeches. A movement was inaugurated to send speakers throughout the United States, especially through the Middle West, to arouse the people to the paramount importance of preparedness. The spirit of the meeting is indicated in the resolutions that were adopted. An outline of these resolutions is as follows:

"The defense of the United States depends upon an adequate navy and a national army founded upon a system of universal obligatory military training and service.

"This system must be *scholly* under the discipline and control of the national authorities. We deprecate all steps which tend to obstruct or postpone the adoption of such a universal system."

The league endorsed the "efforts of Secretary Garrison to obtain an increase in the regular army, the correction of our faulty enlistment law, the establishment of an adequate regular army reserve and the accumulation of an adequate supply of ammunition, artillery and material, but we believe that, in addition to the proposed quota of coast artillery and auxiliary troops, the mobile regular army within the United States should comprise at least four infantry divisions, as recommended by the War College report of 1915."

The league recommended the authorization by Congress of a Council of National Defense, as set forth in the bill in Congress known as the Hobson bill, for the purpose of securing more harmonious co-operation between the executive and legislative branches of the Government with respect to national defense.

As to the navy, it is recommended "that the personnel of the navy be increased in conformity with the requirements of the fleet, as interpreted by the general board of the navy; that there be established for the navy a general staff similar to the general staff of the army, as is customary in all other navies of the world."

Because of the "fact that the general interest in national defense throughout the country has created a number of local and national organizations aiming to increase the efficiency of our military and naval serv-

ice," the league "resolved to immediately endeavor to avoid the overlapping of the effort and energy of these organizations by seeking effective means of unifying and co-ordinating their activities."

The league also declared that because "the misfortune of war would demand from the young manhood of the nation the supreme offering of life itself, a fundamental factor in the problem of preparedness should be such intensive mobilization of the productive, industrial and commercial forces of the United States as would insure in time of war the contribution of their fullest resources at a restricted profit to be regulated by the Government."

Recognizing the importance of the preparedness movement as reflected by other congresses, the league endorsed the attitude of the joint committee of national engineering societies expressed at the recent annual meeting of the American Society of Civil Engineers, demanding adequate enlargements of our army and navy establishments and a thorough and efficient plan of industrial transportation resources of the country.

S. Stanwood Menken, president of the league, announced that upon the invitation of the city of St. Louis and with the co-operation of the Mayor of New York a "national defense conference of Mayors and Mayors' representatives" is to be held in St. Louis March 3 and 4. Seventy-five cities will be represented at this meeting.

The speakers before the congress were:

Mr. Menken, Frederic R. Coudert, New York; Dr. David Jayne Hill, former Ambassador to Germany; John B. Stanchfield, New York; Robert Bacon, former Secretary of State; Luke E. Wright, former Secretary of War; P. H. W. Ross, National Marine League of the United States; Charles G. Curtis, New York; Representative Murray Hulbert, New York; A. B. Lambert, St. Louis; Henry A. Wise Wood, New York; J. Hampton Moore, president Atlantic Deeper Waterways Association; George von L. Meyer, former Secretary of the Navy; Samuel Gompers, president American Federation of Labor; William I. Marbury, Maryland; Senator J. D. Phelan, California; Senator George E. Chamberlain, Oregon; William C. Church, editor Army and Navy Journal, New York; Maj. Gen. E. A. McAlpin, president of the Boy Scouts of America; Gen. E. W. Nichols, superintendent Virginia Military Institute; Henry L. Stimson, former Secretary of War; Capt. Granville Fortescue; George Haven Putnam, New York; George W. Wickersham, former Attorney-General of the United States; Senator Henry Cabot Lodge, Massachusetts, and many others. Letters from former President Roosevelt and former Secretary of State Root were read.

The congress ended its sessions with a banquet, which marked a scene of dramatic moment, as words of solemn warning, written more than a century ago by George Washington and made timely today by the problems confronting the nation, were thrown upon a screen. These are the words:

"If we desire to avoid insult we must be able to repel it; if we desire peace it must be known that we are at all times ready for war."

## Supporting Clarke-Williams Drainage Bill.

The Sixth Annual Drainage Congress was held at Cairo, Ill., January 19 to 21. Addresses were made on the necessity of immediate action by the Government in undertaking a broad campaign of drainage, and resolutions were adopted favoring the Clarke-Williams bill, now before Congress. Officers for the ensuing year were elected as follows: President, George Parsons, Cairo; first vice-president, Frank V. Knight, Chicago; second vice-president, D. E. King, St. Louis; third vice president, Gen. William C. Gorgas, U. S. A.; fourth vice-president, J. L. Craig, Stockton, Cal.; fifth vice-president, George M. Leberman, Pittsburgh; treasurer, A. M. McLachlen, Washington; acting secretary, Phillip R. Kellar, Chicago.

## Virginia Soapstone Products.

The production of soapstone products is planned by the Franklin Soapstone Products Co., which has been incorporated with \$100,000 capital. This company has its offices at Roanoke, Va., and its officers are as follows: F. L. Gitt, president; H. O. Spangler, vice-president; W. W. Lower, secretary-treasurer.



## TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

### New Textile Journal.

A new monthly technical journal devoted to the textile trade publishes its initial number this month under the title of "Textiles."

The new paper succeeds "Knit Goods," and will be edited by Samuel S. Dale, who for 16 years was editor of the "Textile World Record," and who enjoys a wide reputation as an authority on textile matters.

Every branch of the textile industry will be covered by "Textiles," including cotton, woolen, worsted and silk, and special attention will be given to the manufacture of knit goods.

The paper will be published by The Textiles Company, Boston, Mass., of which Edwin B. Pillsbury is business manager.

### A \$30,000 Hosiery Mill.

Hosiery will be knitted, dyed and finished by the Jonesboro (Ga.) Manufacturing Co., and the mill will be driven by electric power. This company has been incorporated with \$30,000 capital by L. Z. Gilbert, J. O. Hightower, Sr., and D. P. Melson.

### Contemplating Electric Drive Improvements.

Electric drive improvements are contemplated by the Chiquola Manufacturing Co., manufacturer of converting cloths, Honea Path, S. C. James D. Hammett of Anderson, S. C., president and treasurer of the com-

pany, writes to the MANUFACTURERS RECORD as follows:

"We are contemplating installing electric power, amounting to about 1600 horse-power, in the late spring or early summer. It is our purpose to purchase secondary power from the Southern Power Co. (Charlotte, N. C.), retaining our steam plant and so arranging that the mill may be driven either by electricity or by steam power; to so arrange that the power distribution will be electrical, whether driven by the steam engine or the purchased electrical power."

### N. B. Woolford Oakum Co.

The N. B. Woolford Oakum Co., Baltimore, has been incorporated by N. B. Woolford, president; C. H. Hawkins, secretary-treasurer; D. N. Woolford, V. H. Power and G. H. Yingling. This company will take over the Baltimore Oakum Co., manufacturer of marine and plumbers' oakum, hemp and cotton fibers, and the Baltimore Fiber Co., manufacturer of jute, hemp and cotton fibers. It will continue the combined enterprises at the old plant, 601 S. Luzerne avenue. No equipment changes or machinery purchases are contemplated.

### Increasing Capacity 35 Per Cent.

An additional building will be erected and equipped with new machinery to increase by 35 per cent. the capacity of the Standard Processing Co., Ridgedale, Tenn. The new structure will be three stories high, of brick, 87 feet long by 61 feet wide, and the contract has been awarded to Chandler & Campbell of Chattanooga. Mercerized and bleached yarns is the output of the Standard plant.

### Muscogee Manufacturing Co. Additions.

Contract has been awarded to Frank A. Pierce, Columbus, Ga., for building a five-story steel girder mill costing \$90,000 for the Muscogee Manufacturing Co. of Columbus. This building will be 250 feet long by 150 feet wide, with foundations of concrete, upper structure

of fireproof brick, fireproof doors and tar-gravel roof. C. L. Makepeace & Co., Providence, R. I., are the architects-engineers. The Muscogee corporation was mentioned January 20 as to invest about \$400,000 for the above and other additional mills, for 22,000 spindles and 300 looms, with other additional machinery, all of which has been purchased.

### Thatcher Spinning Mill.

Plans and specifications are now being prepared for the plant of the Thatcher Spinning Mill at Chattanooga, Tenn. J. E. Sirrine of Greenville, S. C., is the architect-engineer in charge, and contract for the machinery has been awarded to the Whitin Machine Works, Whitinsville, Mass. The building will probably be 310 feet long, of reinforced concrete construction, and the machinery will include 15,000 spindles, with accompanying equipment. This company's organization with \$250,000 capital was mentioned in December.

### Plans of Lowell Bleachery.

An increase of capital from \$200,000 to \$600,000 has been decided upon by the Lowell (Mass.) Bleachery in order to build a large permanent plant at St. Louis. This company has been operating a temporary plant, and its permanent facilities will include bleaching and finishing machinery for monthly capacity of 250,000 pounds of cloth. It is reported that it will construct a three-story brick building for this branch.

### Contract for Thread Mills' Addition.

The Thread Mills Co., Spray N. C., has awarded contract to J. A. Jones, Charlotte, to erect building for its proposed additional mill. This will be a steel and wood building, 330x166½ and 92x34 feet, costing \$70,000, to be equipped with textile machinery, including the electric drive. F. P. Sheldon & Sons, Providence, R. I., are the architects-engineers in charge.

## THE \$750,000 HILLSIDE COTTON MILLS—BIG NEW COTTON MANUFACTURING PLANT BEGINNING OPERATIONS AT LAGRANGE, GA.



The accompanying illustration is a photographic view of the big new cotton manufactory to which reference was previously made as completed by the Hillside Cotton Mills, LAGRANGE, Ga. Summarizing the principal features of this \$750,000 company's factory, Fuller E. Callaway sends to the MANUFACTURERS RECORD revised details, of which the following is a summary: C. V. Truitt, president; S. Y. Austin, vice-president and general manager; Fuller E. Callaway, treasurer; J. A.

Perry, secretary; Park A. Dallis Company, Atlanta, architects, and T. C. Thompson & Bros., Birmingham and Charlotte, building contractors.

The plant includes a main building 132x320 feet, three stories, with loom shed 156x333 feet. Cotton is blown to the pickers in the main building from the opener-room, located to the south of the main building. There are 19 sections of warehouses, each 75x81 feet, the entire plant being under sprinkler protection. The

complete equipment will consist of 25,000 spindles, with 500 to 600 looms, and the mill will have its own bleaching and dyeing plant. Each year the plant will consume 15,000 bales of cotton. Power furnished by a 2500-horse-power steam engine. Weekly capacity will be 120,000 pounds of yarns, twines and kindred specialties. The Hillside Cotton Mills was formed by the officers named, all interested in several other large cotton manufacturing enterprises.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### TWO IMPORTANT COAL ROADS.

#### Virginian Railway and Baltimore & Ohio Expected to Build Kentucky Extensions.

It looks as if the long-contemplated extensions of the Virginian Railway down the valley of the Guyandotte River in West Virginia would be constructed soon. The enormously increased demand for coal has directed attention to the development of new coal regions, and maps were recently filed in that State to protect rights of way owned in the interest of the company along surveys made several years ago between Mullens and Gilbert, W. Va. These two points are about 30 miles apart in a direct line, but owing to the topography of the intervening country it is probable that the route followed by the railroad would be considerably longer. The valley itself is winding, and the finding of easy grades would also contribute to the location of a line of greater length.

That the new railroad will extend far beyond Gilbert, which is almost directly west of Mullens, seems certain. It was reported last October that engineering corps, working in the interest of the Virginian Railway, were investigating a route along the Levisa Fork of the Big Sandy River in Pike county, Kentucky, and now the statement is made that the maps show the route west of Gilbert as following Gilbert Creek; thence over the mountain to Bens Run and the Tug Fork of the Big Sandy, to Peters Creek, to Big Creek, and to the Levisa Fork, whence it continues to Shelby, Ky., about 100 miles. This would give direct connection with the Elkhorn coal region of Kentucky, as both the Chesapeake & Ohio and the Baltimore & Ohio lines would be reached there, although the Baltimore & Ohio line is the detached road about 30 miles long which it built several years ago to get out the product of the Consolidation Coal Co.'s mines at Jenkins, Ky.

Now it also appears that the Baltimore & Ohio, with a similar view to preparation for meeting the increasing demands for coal, will construct its long-considered extension of about 100 miles long from Kenova, W. Va., or a point near there up to Shelby. The company has made surveys, and, it was recently reported, filed maps for the extension. It is not stated yet whether rights of way for any of the route have been obtained, although it seems probable that the real estate men have been at work before this in anticipation of a decision to begin construction. The railroad company's recent award of contract for a \$1,500,000 additional coal pier of the most improved type at Curtis Bay, Baltimore, is another indication of its expectation that coal shipments will become unusually heavy within the next year or two. The railroads, however, are yet reticent as to their construction of the extensions.

At present the coal which comes out of the Consolidation mines in the Elkhorn field via the Baltimore & Ohio branch is carried out to the main line of that system over the Chesapeake & Ohio Railway, but it has been anticipated from the beginning of this arrangement that the coal traffic would grow to such dimensions that a second line would soon be necessary. The Chesapeake & Ohio's line along the Big Sandy is single track; hence the construction of another line by the Baltimore & Ohio Railroad through the same territory would be almost like a double-tracking of the present line. Whether there would result an arrangement by which the two roads could be used as if they were one double-track line remains to be seen, although it might be of advantage to both systems to so employ them.

Considering the growth in the output of coal, it must be remembered that the line to be followed by the Virginian Railway in its probable early extension from Mullens, W. Va., to Shelby, Ky., will, in addition to putting the railroad in immediate connection with the Elkhorn region, result in developing new coal fields along its route in West Virginia and perhaps also some new mines in Kentucky. There are said to be large tracts of fine timber land on the way, which are heavily underlaid with superior coal, as recently de-

scribed in the MANUFACTURERS RECORD, and a heavy production might be expected from them.

The recent sale by the Virginian Railway of \$2,500,000 of its first mortgage 5 per cent. bonds to a syndicate in New York has no relation, it is officially stated, to the filing of maps for the route between Mullens and Gilbert.

### ATLANTA TO THE SEA.

#### Agitation for Construction of a New Road to a Port on the Atlantic Coast.

Steps being taken by the Western & Atlantic Railroad Commission of the State of Georgia to obtain estimates of the probable cost of building an extension of the State-owned railroad from Atlanta to the seacoast and the report from Augusta that A. J. Twigg & Sons of that city have requested detailed information preliminary to submitting a bid lend particular interest to the notice of application for charter of the Augusta & Western Railway Co., with the name of W. J. Twigg of that firm heading the list of applicants. The proposed line is to run from Augusta to Athens, Ga., about 95 miles. It would doubtless connect Appling, Washington and Lexington en route, and it is said that an old grade from Augusta to Appling which was never built up might be utilized.

How such a new road would reach the coast is not yet disclosed, but there are several lines partly built and having seaport terminals with which connection might be established. One of these is the Savannah & Northwestern, but that has been expected to finally land in the Atlantic Coast Line system through connection with the Georgia Railroad, although a deal based on that idea was turned down some time ago. Another is the Midland Railway, which George M. Brinson is building to run from Savannah to Athens, and which is now operating about 40 miles between Statesboro and Stevens Crossing. The Georgia Coast & Piedmont Railway, which has a seaport at Darien, Ga., is still another road which might be connected with, although much construction would also be required to reach it. It has been suggested, moreover, that the new enterprise of Mr. Brinson, who built the most of the Savannah & Northwestern Railway, which was formerly known by his name, might become part of the Seaboard Air Line, which would welcome a road from Athens to Savannah to connect the two main lines of its system, besides giving it a route from Atlanta to the sea. At present, if a train has to run over the Seaboard's own rails between Atlanta and Savannah it has to go all the way to Hamlet, N. C., to make a direct connection.

The Western & Atlantic Railway, 137 miles long from Chattanooga to Atlanta, is leased by the State of Georgia to the Nashville, Chattanooga & St. Louis Railway until December 27, 1919, and the State authorities have indicated that either a larger rental would have to be paid or other steps would be taken to realize a greater revenue from the property. If the lease is not renewed, it seems not improbable that the construction of an extension to a seaport will be undertaken.

Besides W. J. Twigg, those interested in the application to charter the Augusta & Western Railway Co. are Thos. Barrett, Jr., Geo. W. Wright, Geo. W. Lombard, John D. Dickey and Patrick H. Rice, all of Augusta; Robert W. Lamkin of Athens, C. O. Stevens of Crawford, Ga.; R. O. Barksdale and W. T. Johnson of Washington, Ga., and L. E. Blanchard of Harlem, Ga.

### PENNSYLVANIA'S \$1,000,000 PIER.

#### Extensive Facilities at Baltimore to Handle Export Coal by Early Summer.

It is expected by the Pennsylvania Railroad Co. to complete its new \$1,000,000 coal pier at Baltimore early next summer so as to have it ready for the rush of export shipments, which are usually heavy at that season. Construction is in progress, and the company says it is anticipated that the pier will prove one of the most efficient in the world. It is situated at the Canton wharves, and will be able to load 20,000 tons of coal per day into vessels. It will be 940 feet long

and 66 feet wide, and will be erected on creosoted piles, with reinforced concrete floor and concrete bulkhead. There will be wharf space to load four vessels simultaneously, both sides of the pier being utilized.

In operating the pier the loaded coal cars will be pushed from the yard up on a "kick-back," from which they will roll by gravity to a dumper, where they will be lifted and turned over, the coal falling into a hopper. Beneath the hopper small cars of four tons capacity will take the coal and run by means of an endless cable up an incline and out upon a trestle along the center of the pier. On both sides of this trestle traveling unloaders will be provided, and they can be moved to any desired location. The contents of the small cars will be dumped automatically into hoppers on these unloaders. Then the coal will be elevated by a conveyor to telescopic chutes lowered into the holds or the bunkers of the ships.

To facilitate the transfer of coal from the cars to the ships in cold weather a thawing-house with a capacity of 30 cars is to be provided. Coal which has been frozen in the cars during transit from the mines will there be rapidly thawed out by steam, and it can then be easily dumped.

There will also be built at the end of the pier storage bins for the different grades of coal required for the local harbor trade. From these bins the coal will be loaded into the boats by means of a small traveler.

The plans for the pier include the construction of a storage yard for both loaded and empty cars, its capacity being 1000 cars.

The Maryland Dredging & Contracting Co. of Baltimore has been awarded the contract for dredging the dock and for grading the new yard. The pier will be erected by the Arthur McMullen Company of New York, and the machinery for operating it will be furnished by the Mead-Morrison Manufacturing Co. of Chicago.

### Electric Railway Receivership.

W. G. Haug of Temple, Tex., general manager of the Southwestern Traction Co., operating 15 miles of electric railway in Temple and Belton and between the two towns, has, according to a report from Waco, been appointed receiver for the property, and steps have been taken in the courts on behalf of the Susquehanna Trust & Safe Deposit Co. of Williamsport, Pa., to foreclose the first mortgage, under which \$130,000 of bonds have been issued. The line connecting the two places is about 10 miles long, the rest of the mileage being street railway in each.

### Mexican Road Will Rehabilitate.

The International Railways of Mexico, now part of the National Railways of Mexico, according to a report from Houston, Tex., will be rehabilitated immediately. Considerable construction material, including a large number of steel rails, will be required, and the company will also buy 50 locomotives, about 2000 freight cars and 30 passenger cars. W. E. McGraw of Chicago, it is stated, has been appointed general superintendent, and will open offices at Houston. This particular company includes the roads between Vera Cruz and Tampico and the City of Mexico.

### Large Increase in B. & O. Earnings.

There was an increase of nearly \$2,500,000, or more than 37 per cent., in the gross earnings of the Baltimore & Ohio Railroad during December as compared with December a year ago, while the increase in net earnings was over 44 per cent. The figures are as follows: Operating revenue \$9,164,762, increase \$2,490,687; total operating expenses \$6,538,336, increase \$1,685,832; net operating revenue \$2,626,426, increase \$804,855.

During the first six months of the company's year, which begins July 1, the gross earnings as compared with the same period of the last year showed an increase of very nearly 19 per cent., while the increase in net earnings was almost 40 per cent. The figures are thus: Operating revenues \$56,040,304, increase \$8,901,869; total operating expenses \$37,838,402, in-



crease \$3,727,094; net operating revenue \$18,201,902, increase \$5,174,775.

Should earnings continue to increase in the same ratio during the last half of the company's year the gross would approximate \$108,000,000 for the entire twelvemonth, which would be a new record and about \$5,000,000 greater than the previous record of the company in 1913.

### Opening of New Line to Pensacola.

The completion of the Gulf, Florida & Alabama Railway to a connection with the Southern Railway at Kimbrough, Ala., which was accomplished by the construction of an extension of 52½ miles from Broughton, Ala., was celebrated the other day at Pensacola, when a special train bearing R. C. Megargel of New York, president of the new line, and other railroad officials and business men arrived from Birmingham over it. The last work in the completion of the extension was the building of the large bridge over the Alabama River near Pine Hill, and that was finished, it is stated, but a day or two before the opening. The celebration was marked by a parade and a dinner, which were largely attended.

A regular schedule for the road will soon be established. President Megargel is reported saying that the line already has a comfortable tonnage booked from Birmingham, but that the principal difficulty is to secure ships to handle the traffic when it is delivered at Pensacola, although it is hoped to overcome that shortly. Its terminal facilities there are being considerably enlarged.

The road is to be further extended from Kimbrough via Greensboro to Tuscaloosa, Ala., about 75 miles, and the construction of this new mileage may be undertaken this year.

### New Equipment, Etc.

Pennsylvania Railroad Co. has ordered 5000 steel hopper gondola cars, 3000 to be built by the Cambria Steel Co., Johnstown, Pa., and 2000 by the Ralston Steel Car Co., Columbus, O. The railroad will also build at its own shops, Altoona, Pa., 105 locomotives, 1000 steel box cars and 75 other freight cars. Estimated market value of all this equipment about \$9,000,000.

Illinois Central Railroad is in the market for much new equipment, including 20 Pacific type locomotives, 1000 coal cars, 300 stock cars, 45 passenger cars, 10 dining cars, 4 buffet cars, 7 chair cars, 18 baggage cars, 6 baggage and mail cars and 4 mail cars. A report from Chicago says that the road has also been authorized to issue \$1,000,000 of 4½ per cent. certificates of debt toward the purchase of 50 locomotives and 1000 refrigerator cars.

Norfolk & Western Railway is receiving deliveries on equipment orders placed some time ago, 5 out of 30 engines having arrived and 2 steel baggage and postal cars being also received.

Chicago, Milwaukee & St. Paul Railway has ordered 30,000 tons of rails from the United States Steel Corporation.

Nashville, Chattanooga & St. Louis Railway is reported in the market for 20 dump cars.

International & Great Northern Railroad is getting prices on 5 passenger cars, 2 dining cars, 2 mail cars and 2 baggage cars.

Southern Railway is reported to have obtained prices preliminary to ordering 1000 box cars.

Virginian Railway has ordered a triple articulated locomotives from Baldwin's.

Sugarland Railway has ordered 2 10-wheel locomotives from the same plant.

Florida East Coast Railway has received and placed in service its gas-electric car built by the General Electric Co. It is operated between Jacksonville and Mayport.

Department of the Interior, Washington, is reported to have ordered 50 dump cars from the W. J. Oliver Company, Knoxville, Tenn.

Cincinnati, New Orleans & Texas Pacific Railway is in the market for 1000 box cars.

Chicago, Burlington & Quincy Railway has ordered 50 automatic air dump cars from the Western Wheeled Scraper Co., Aurora, Ill.

## Good Roads and Streets

### SOUTHERN HIGHWAY ACTIVITIES.

#### Record of Week's Progress in Improvements in City and Country.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

#### Bonds Voted.

Bartlett, Tex.—City voted \$24,000 bonds for street paving.

Bay Minette, Ala.—Baldwin county voted \$200,000 bonds to improve roads and \$55,000 bonds to construct its portion of Mobile-Baldwin counties highway.

Galveston, Tex.—City voted \$875,000 bonds for street improvements, etc.

Hillsboro, Tex.—Hill county will issue \$150,000 bonds to improve roads in Road District No. 2.

#### Bonds to Be Voted.

Belton, Tex.—Bell county votes February 19 on \$8000 bonds to construct roads in Salado Precinct.

High Point, N. C.—City votes March 7 on \$50,000 bonds to improve streets.

Hopkinsville, Ky.—Christian county votes March 18 on \$400,000 bonds to improve roads.

Taylor, Tex.—City votes February 15 on \$50,000 bonds for additional street paving.

Wellsburg, W. Va.—Brooke county will vote on \$300,000 bonds to construct roads.

#### Contracts Awarded.

Baltimore, Md.—City awarded \$1446.75 contract for street improvements.

Carrizo Springs, Tex.—Dimmit county awarded \$40,000 contract to improve roads.

Charleston, W. Va.—City awarded contracts for additional paving to include 75,000 square yards asphaltic concrete and 15,000 square yards brick; estimated cost \$180,000.

Florence, S. C.—City awarded contracts for 2½ miles of sidewalks, etc.

Houston, Tex.—City awarded contract for 22,000 yards surface treatment on Washington avenue.

Kansas City, Mo.—City awarded \$67,000 contract to construct 5000 square yards macadam paving, including 14,000 cubic yards grading, in park.

Lincolnton, N. C.—City awarded contract to pave additional block with asphaltic concrete and about three additional miles of cement sidewalks.

Miami, Fla.—City awarded contract for paving, curbing, etc., to cost \$21,000.

Montgomery, Ala.—Montgomery county awarded \$11,158.52 contract to construct 10 miles of topsoil road.

New Orleans, La.—A. B. Blakmore has \$7380 contract to construct earth road 2.5 miles long.

Sherman, Tex.—Grayson county awarded contract for 235 miles of road construction; \$867,000 available.

#### Contracts to Be Awarded.

Baltimore, Md.—City receives bids until February 2 for street paving; 139,500 square yards sheet asphalt; 13,150 square yards granite block; 10,800 square yards vitrified block and 10,110 square yards granite block repaving.

Bath, W. Va.—City receives bids until February 15 to construct 15,000 square yards paving, etc.

Morganfield, Ky.—Union county will construct nine miles of road.

Clearwater, Fla.—City receives bids until February 9 for 4600 yards of vitrified brick paving, with 4500 feet concrete curbs and gutters.

Parkersburg, W. Va.—City has \$200,000 available for street paving, etc.

Pineville, W. Va.—Wyoming county will construct 15 miles of road.

### Planning Joint Road Congress.

At a recent meeting of the board of directors of the American Highway Association a resolution was adopted to co-operate with the American Association of State Highway Officials for the purpose of holding a joint road congress in December, 1916, or at a later date.

### 235 Miles of Highway.

Contracts for 235 miles of highway have been awarded by the Grayson County Commissioners, Sherman, Tex., having \$867,000 available for road improvements. The Womack Construction Co., Houston, has contract for 176¼ miles, and J. A. McCoy, Abilene, has contract for 58¾ miles.

### WILL BUILD BIG CHEMICAL PLANT.

#### A \$100,000 to \$1,000,000 Investment Proposed for New Enterprise at Sistersville.

A chemical plant to cost from \$100,000 to \$1,000,000 is proposed at Sistersville, W. Va., by the Caldwell Chemical Co., C. W. Caldwell, president, which writes to the MANUFACTURERS RECORD as follows:

"Our company has secured ground and large concessions from the city. Twenty acres have been given the company, on which by-product coke ovens, distilling and recovery plant and nitrating apparatus will be installed. The buildings will be of sheet iron and concrete. The daily capacity of the coking plant will be 1000 tons of coal and the capacity of the remainder will be sufficient to work up the coal tar obtained from such distillation. We have not as yet secured an architect and contractor, but are ready to do so."

This company was mentioned in November as organized, its office then being at 202 Woods Building, Evansville, Ind., with plans for building chemical works in Kentucky.

Later the company writes to MANUFACTURERS RECORD:

"Bids are desired from contracting engineers and chemists for the complete erection of plant for the manufacture of coal-tar products. Plant will cost approximately \$100,000. Write or wire C. W. Caldwell, Sistersville."

### An \$80,000,000 Coal Company Merger.

Referring to announcements of the merger of the Pittsburgh Coal Co. of Pennsylvania and the Monongahela River Consolidated Coal & Coke Co., F. J. Le Moyne, secretary of the Pittsburgh corporation, Pittsburgh, writes to the MANUFACTURERS RECORD as follows:

"The Pittsburgh Coal Co. of Pennsylvania, the entire capital stock of which is owned by the Pittsburgh Coal Co. (New Jersey) and the Monongahela Company, the entire capital stock, with the exception of a few shares, of the same ownership, have been merged under date of December 31, 1915, into Pittsburgh Coal Co. (a Pennsylvania corporation), with a capital of \$80,000,000, this being the aggregate capital of the two merged companies."

### To Promote Southern Drainage and Reclamation.

At a recent meeting in Charleston, S. C., the Southern Drainage and Reclamation Association was organized, with the election of the following officers: President, Samuel G. Stoney of Charleston; vice-president, W. H. Marshall of Fort Lauderdale, Fla. The executive committee chosen consists of J. A. Wade, Montgomery, Ala.; T. J. Campbell, West Palm Beach, Fla.; E. J. Watson, Columbia, S. C.; Dr. Jos. Hyde Pratt, Chapel Hill, N. C.; Dr. W. McCallie, Atlanta, Ga.; George W. Koerner, Richmond, Va.

It was decided to hold the annual meeting of the new association in February at Fort Lauderdale, Fla., which will give those attending an opportunity to investigate the extensive reclamation work now in progress in Florida, and special arrangements will be made to enable the delegates to visit this work.

## FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

### Norway Buyer Wants Magnesite.

A. S. G. Hartmann, P. O. Box No. 1, Christiania, Norway:

"Have some American firms give us a quotation for magnesite. We should like offers for 50 tons of Euboean magnesite for Euboolith floor-coating, finest ground calcined. The magnesite which we use is genuine Euboean magnesite, guaranteed minimum 85 degrees magnesium oxide and not contain lime substances. Specific weight 1-1.1. We want the price stipulated f. o. b. export steamer New York, inclusive necessary packing (bags or good casks). We buy every year large quantities of such magnesite for Euboolith floor-coating here in Norway. We can procure guarantee from the Norwegian Government that the magnesite will not be re-exported from Norway in any form. Together with the quotations we want an analysis of the magnesite offered. Concerning terms of payment by eventual delivery, we hope firms will accept usual terms, which are: At the beginning of every month and at latest on 8th in check on New York, for all goods which have arrived here or any other port of destination in Norway in course of preceding month. If American merchants will not accept these terms we will pay in Christiania against shipping documents. We refer to Boston Belting Co., Boston; Link-Belt Co., New York; Knox Woolen Co., Camden, Maine; Centralbanken for Norge, Christiania."

### Railway Equipment, Generator Tubes, Gasoline, Etc.

De Brugada, Margeot & Co., Port Louis, Maurice:

"The articles that interest us most are rails, cars and locomotives of different weights for sugar plantations. Oil for lighting, gasoline for automobiles and nitrate of potash. We also would like to get tubes for generators. What makes it difficult to deal with the people in the Isle of Maurice and the people in the United States are the conditions they impose for payment. They expect payment at New York upon receipt of documents, but the great majority of manufacturers of France and England make drafts on us at 60, 90 and 120 days' sight. In order to facilitate business, we would be content to pay at 30 days' sight after receipt of document. As far as petroleum is concerned and gasoline, we would be willing to work and do business on a basis of 5 per cent. for ourselves. Such terms are accorded to us by the big companies of our market. The companies are the Standard Oil Co. and the Asiatic Petroleum Co., both of which have offices here. We would be glad to have the terms of sale and conditions named us in detail."

### Africa Wants American Products.

Picot & Co., Ltd., National Bank Buildings, Simmonds street, Johannesburg, South Africa:

"We are interested as agents in all manner of American products, excepting machinery, and if any of your friends are looking out for reliable agents to work on a commission basis, with orders to be confirmed through an American commission house."

### India Wants American Products.

Jehangir Jijibhoy Batliwala, 5 Proctor street, Grant road, Bombay, India:

"I am desirous of making connection for handling American products, and I am in search of American firms who wish to be represented in Bombay and desiring to introduce their goods in the Bombay market. If any of your manufacturers decide to look for an outlet in India for their goods, give them my address

and they can give me full details as to the kind of goods they would like to introduce here. I am chiefly interested in quick-selling articles and specialties, but have little liking for handling elaborate machinery, as I have little experience in this line. Owing to war, there is a great demand in our market for aniline dyes, chemicals, provisions, glassware, cutlery, stationery, toys, leather goods, cotton and woolen goods, tionery, hosiery, etc., and there is little doubt that many of these goods manufactured in your country can find a ready sale in India provided competitive prices are offered by your manufacturers to capture the Indian market. The products in which I am principally interested are hosiery, cutlery, stationery, chemicals, leather goods, boots and shoes, toys and sporting goods. Put me in communication with manufacturers who can supply samples and lowest 'Cifci' quotations."

### Wants Portland Cement and Railroad Ties.

T. L. Beckwith, Hotel Pasaje, 95 Parado street, Habana, Cuba:

"The writer represents in a preliminary capacity a well-known contractor and a local banking house in obtaining prices on following: Atlas Portland cement f. o. b. New York, terms cash against documents, lots of 2000 to 5000 barrels, total 50,000 barrels, with option of increasing to 100,000 barrels, delivery to start fall of 1916 and continue over a number of months; price 10,000 barrels c. i. f. Havana, immediate delivery; prices on pine railroad ties c. i. f. Cienfuegos, Cuba, terms sight draft; hewn ties 7x8 inches by 8 feet, delivery as follows: 15,000 March, 1916; 30,000 June, 30,000 December, 30,000 March, 1917; 40,000 June, 1917. Subject to buyer's inspection before shipment. Wholly satisfactory banking reference given at proper time. Fullest possible data desired, together with tentative prices, in first letter."

### Machinery Wanted for Spain.

M. Gatell, Apartado 558, Barcelona, Spain:

"My business is agent for manufacturers of paper, and I shall be delighted if you will aid me in getting into contract with people engaged in that work, no less than with people who manufacture machinery for making paper and equipments in that line—colors, anilines and printing inks; in a word, all that is connected with this kind of work is of great interest to me. As a general thing, our merchants buy goods and have them delivered and pay for them according to the German method, but if your people are not willing to deal with us in this way you might make us other propositions. We need all kinds of dry paper, blotting paper, paraffine paper, silk paper for wrapping up confectionery, Japanese rice paper and tinfoil for wrapping up packages."

### Acids, Chemicals, Dyes, Etc.

Emile Cauwes, Rue De Trevisse 4, Paris, France:

"I am interested in colors for both cotton and wool dyes and prints and skins and hides, such as direct blacks and blues, betanaphtol, etc., all aniline colors, oil, salt, naphthaline and many other chemical products, such as all acids. All new products and drugs unknown yet on this side would interest me the most. I know American producers of colors will be ready sooner than any on this side, as they are now working in view of new manufacture and having considerable demands for the present and future. Put me in communication with good firms to represent as agent."

### Wants Crepe Paper.

Adolph Oettinger, Bahnhofstrasse 22, Zurich, Switzerland:

"I ask your kindness in giving me addresses of crepe paper manufacturers. I am, or rather have been, in correspondence with several such manufacturers as the paper mills in Holyoke, Scott Paper Co., Philadelphia, and some more, but they make only light crepe papers, while I am looking for a stronger quality in white color, withstanding moisture to some extent, and still not being too hard. I need this for an article

which has received European patents and is filed for patent in the United States. Large quantities will be used. All manufacturers who can compete with this country will interest me, for by convenience I can do many sales of all kinds of American products, and charge only commission. I can give first-class reference of many connections I have in America."

### Commercial Directory of India.

Khosla's Directory of India, Burma and Ceylon, Khosla Bros., publishers, Lahore, India:

"We enclose copy of 'How to Catch Indian Trade,' Khosla's Commercial Directory for 1916 is in press, and will be out about March 31. It has an extensive sale in all parts of India, Burma and Ceylon, and in foreign countries. We conclude you are interested in increase of American trade in India, and inform you that Khosla's Directory will be the best medium for the purpose. We have a special section for foreign manufacturers, merchants and exporters, and their names are inserted at a nominal charge. The directory is very popular amongst Indian importers, who buy millions of dollars' worth of goods every month."

### Foods, Meats, Colonial Supplies, Etc.

Rud. Oschin, Petrograd, Russia:

"We have many inquiries for the products of your country, and I would like to act as agent for some of your firms. I am ready to act as agent and also to buy and purchase on my personal account. I shall be glad to give you references when you wish them. Among the other things we are interested in is preserved meats and foods of all kinds and supplies for the colonies."

### Steel, Tin, Vaseline, Grain, Etc.

J. Carreira Junior, Recife, Pernambuco, Brazil:

"I would appreciate it very much if you would make public some kind of a notice in regard to what we are after, so that we can get in touch with your manufacturers. Ask them to communicate with me direct. The articles that interest me most at present are grain, malt, paraffine, vaseline, tin, steel, spices from India, etc."

### Inland Centers Would Immediately Suffer From Foreign Invasion.

New York, January 25—[Special.]—Judge E. H. Gary, chairman of the United States Steel Corporation, in his advocacy of President Wilson's defense plan, makes it clear that inland centers would quickly feel the effects of attack by foreign foes upon the seacoast cities. The loss of the seaport cities, or their destruction by invaders, would result in the loss of markets and financial support to other sections.

"Our great national wealth, our commercial prestige, our enterprise are all reasons for national insurance by preparedness," he said. "We have been forced into the position of a world power, and we are compelled to observe our responsibilities."

"Coupled with this is the duty we owe our neighbors to the south of us, and our responsibilities regarding our island possessions, which force us to consider what must be done in preparedness."

### A Correction.

Arthur D. Little, Inc.,

Boston, Mass., January 25.

Editor Manufacturers Record:

I desire to thank you for the prominence which you have given to my address before the American Institute of Chemical Engineers on "The Utilization of Wood Waste," but would point out that in the editorial comment which preceded the article the figures quoted are given as those for the concurrent yearly production, instead of the concurrent daily production. In the text, however, the potential production was correctly given as daily.

A. D. LITTLE.



# Construction Department

## IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

### HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

### DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

### BRIDGES, CULVERTS, VIADUCTS

Ark., Cotter.—Cotter, Rush & Mineral Belt Ry. Co., R. P. Sharpe, Gen. Mgr., will build steel bridge across Crooked Creek.

Ark., Cotter.—Cotter-Rush & Mineral Belt R. R., R. P. Sharpe, Ch. Engr., Cotter, will construct 120-ft. steel span; piling approaches; also build several smaller wooden spans. (See Machinery Wanted—Railway Equipment.)

Ga., Tignall.—Elberton & Eastern R. R., Alex. Wilson, Ch. Engr., Elberton, Ga., is reported to build timber trestle requiring 52,000 ft. timber.

Ky., Morganfield.—Union county contemplates voting Apr. 1 on \$450,000 bonds to construct bridges and roads. Address County Commrs.

Mo., Warrensburg.—Johnson County Commrs. let contract to Kansas City Bridge Co., Kansas City, at \$9505 for bridge work.

N. C., Newland.—Avery County Commrs. let contract Roanoke Bridge & Iron Co., Roanoke, Va., for steel work for 10 bridges; let contract Lutten Bridge Co., Knoxville, Tenn., for 8 bridges; reinforced concrete arches. (Bids lately noted.)

S. C., Charleston.—Seaboard Air Line Ry., W. D. Faucette, Ch. Engr., Norfolk, Va., will build various bridges between Charleston and Savannah; Jefferson Construction Co., People's Bank Bldg., Charleston, Contr. for railway construction, will construct these bridges.

Tenn., Harriman.—County Court, Kingston, will build 800-ft. concrete bridge across Emory River; plans and specifications obtainable from S. A. Breazeale, Harriman; bids until Feb. 10. (See Machinery Wanted—Bridge Construction.)

Tex., Dallas.—Northern Texas Traction Co. has begun construction of steel and concrete viaduct across railway tracks leading into proposed railway union station; ultimate expenditure planned, \$500,000; first section to be 2000 ft. long and cost about \$100,000; temporary trestle after main structure crosses tracks; concrete approach on Dallas end; floor of viaduct of solid reinforced concrete; double tracks on main structure and on both approaches; J. R. Hammond of engineering department will superintend primary building. (Noted in Dec.)

Tex., Houston.—City let contract J. H. Richardson & Co. at \$42,664 to construct reinforced concrete bridge over Buffalo Bayou at Milam St.

Va., Pemberton.—Virginian Ry., H. Fernstrom, Ch. Engr., Norfolk, Va., will construct 5 bridges; plate girder or I beams on concrete abutments and piers; 35, 50, 60 and 100 ft. long; also tunnel 350 ft. long; Walton Construction Co., Falls Mills, Va., has contract in connection with railway construction on Winding Gulf Branch.

W. Va., Williamson.—Mingo County Commrs., Williamson, and Pike County (Ky.) Commrs., Pikeville, Ky., will construct bridge across Tug Fork of Big Sandy River at Williamson, connecting Mingo and Pike counties; steel superstructure; concrete substructure; wooden roadway; bids until Feb. 8.

### CANNING AND PACKING PLANTS

Fla., Tampa.—Florida Packing & Provision Co. is lately noted organized with \$100,000 capital to establish packing plant; erect \$25,000 building for cold-storage and refrigerating plant; Jos. Mizell, Pres., Arcadia, Fla.; Geo. Booth, Mgr., Tampa.

Ga., Valona.—Atwood River Canning Co., W. H. Kittles, Mgr., will erect 100x30-ft. mill-construction building; install machinery for oyster canning. (Lately noted inceptd. with \$5000 capital.)

Tex., Laredo.—North Laredo Packing Co., capital \$3300, inceptd. by A. P. Nye, John H. Davis and P. D. Parker.

### CLAYWORKING PLANTS

Ark., Ponchartrons—Brick.—R. A. Roberts, Jos. Peters and Jos. Schmidt, Jr., organized company to manufacture brick.

W. Va., Huntington—Bricks.—West Virginia Paving & Pressed Brick Co., 16th St. and 14th Ave., will undertake improvements to plant, to include 3 down-draft kilns and pug mill, costing \$20,000; present daily capacity is 80,000 bricks, and additional kilns will increase daily capacity to 100,000 bricks.

### COAL MINES AND COKE OVENS

Ala., Cordova.—DeBardleben Coal & Coke Co., Birmingham, Ala., contemplates con-

structing lock and dam at Sanders' Shoals in Warrior River, 5 mi. above Cordova; river 250 ft. wide; estimated that 8-ft. lift will be sufficient; plans to build lock and dam for purpose of avoiding rail haul of 21 mi. of its coal from mines at Sipsey to Cordova.

Ky., Hazard.—Hazard Coal Co. increased capital from \$50,000 to \$100,000; will improve plant.

Ky., Lexington.—Woodford Coal Co. organized with S. W. Calder, Pres.; S. S. Yantis, Secy.; will develop mines in Eastern Kentucky coal fields.

Okla., Durant.—Lone Oak Oil, Gas & Coal Co. inceptd. by S. Akers and others. (See Gas and Oil Enterprises.)

Okla., Kusa.—Long-Bell Lumber Co., Kansas City, Mo., is reported to develop 400-acre coal lease mile southwest of Kusa.

W. Va., Beckley.—White Stick Co., capital \$10,000, inceptd. by T. R. Ragland, M. E. Gunnoe, Joe J. Smith and others.

W. Va., Clarksburg.—National Coal Mining Co., capital \$50,000, inceptd. by C. B. Johnson of Clarksburg; J. M. Hamilton, Jr., of McWhorter, W. Va.; C. R. Wilson, Pittsburgh, Pa., and others.

### CONCRETE AND CEMENT PLANTS

Md., St. Helena.—Concrete Piles.—Raymond Concrete Pile Co., New York, and Munsey Bldg., Baltimore, bought three acres land on Colgates Creek and Baltimore & Sparrows Point R. R.; will erect buildings for repair and storage of equipment of Baltimore branch; probably steel frame; corrugated-iron frame; probably develop into plant for manufacturing equipment, pile-drivers, steam hammers, etc.

### COTTON COMPRESSES AND GINS

Ala., New Decatur.—F. L. Matthews of Attalla, Ala., and others are reported to build compress to cost \$75,000.

Ark., Lake Bayou.—Lake Bayou Gin Co., capital \$2000, inceptd. by T. R. Kersh, Pres.; G. W. West, V.-P.; J. W. Hubbard, Secy.

Ga., Augusta.—McFadden Bros. of Philadelphia, Pa., and Rogers Co., Norfolk, Va., are reported as planning to build cotton compress and warehouse plant estimated to cost \$250,000; sprinkler system throughout; 10,000-bale compress and warehouse with 67 1000-bale compartments.

Miss., Holly Springs.—Granada Cotton Compress Co., 1012 Falls Bldg., Memphis, Tenn., will rebuild plant lately noted burned; has not determined building details; install compress machinery costing \$25,000; daily capacity 1000 bales.

Tex., Corpus Christi.—Trot Gin Co., capital \$10,000, inceptd. by Joe Hirsch, L. C. Wells and Robert E. Gorce.

Tex., Marion.—Marion Farmers' Ginning Assn., capital \$11,000, inceptd. by W. Staats, L. H. Wetzel and Richard Nuhn.

### COTTONSEED-OIL MILLS

Okla., Ardmore.—Ardmore Oil & Milling Co., W. F. Lindsay, Mgr., will build fire-proof structure; does not want bids; install 4-press hydraulic oil mill.

S. C., St. Matthews.—D. G. Ziegler, Son & Co., Engrs.-Archts., will organize company to build 30-ton cottonseed-oil mill, 15-ton ice plant and fertilizer factory; capital \$100,000. (See Machinery Wanted—Oil Mill; Ice Plant; Fertilizer Equipment.)

### DRAINAGE SYSTEMS

Ark., Newport.—Bayou DeView Drainage Dist. (R. J. Kibler of Hickory Ridge, Ark., Commr.) will construct drainage system; main canal 18 mi. long; reclaim 50,000 acres farming lands in White River Valley; W. H. Nelson and W. S. Newsom of Wynne, Ark., are Engrs. (Noted in August.)

Ark., Marion.—Commrs. Crittenden County Drainage Dist. No. 7, H. F. Wallis, Chrmn., Turrell, Ark., let contract R. H. and G. A. McWilliams, Memphis, Tenn., and Chicago, to construct 44 mi. ditches, requiring excavation 1,800,000 cu. yds. earth, at \$133,830; reclaim 40,000 acres; Morgan Engineering Co., Engr., Goodwyn Institute Bldg., Memphis. (Further facts lately noted.)

N. C., Bayboro.—Southern Drainage and Construction Co., Kinston, N. C., received contract at about \$30,000 to construct drainage

system for 10,000 acres swamp land in Pamlico county.

Okla., Sallisaw.—Sequoyah County Commissioners engaged Winters & Dove, Merchants' National Bank Bldg., Fort Smith, Ark., to survey and plan for Drainage Dist. No. 1; 10,000 acres; invite construction bids in about 6 months; estimated cost \$50,000.

### ELECTRIC PLANTS

Ala., Alabama Port.—Tidewater Securities Corp., Mobile, proposes to establish electric-light plant. (See Miscellaneous Construction.)

Ark., Booneville.—Booneville Light & Power Co., H. P. Harley, Mgr., contemplates constructing 16,500-volt single-phase (cedar pole) transmission line, 28 mi. long, to supply 4 towns with electricity; install equipment for street lighting and distributing systems, meters, etc.; require material for 4-mi. 2300-volt line, same as above, for one town only; contemplates 3-in. installations, using single-phase motors from 5 to 25 H. P.; probably unity-power-factor motors. (Lately noted inceptd. with \$50,000 capital.)

Ala., Decatur.—City contemplates constructing electric-light plant costing \$40,000; Xavier A. Kramer, Engr., Magnolia, Miss.

Ark., Gravette.—City contemplates improvements to electric-light plant, including installation of boilers, engines, generators and pumps; E. H. Crayton, Supt. (City Council noted in October as considering plan to install engines in electric-light plant and water-works.)

Ga., Griffin.—Light, Water and Sewerage Com. contemplates extending ornamental street-lighting system; plans to install 15 series incandescent street lamps.

Ky., Louisville.—Louisville Gas & Electric Co. plans issuing \$1,000,000 bonds for improvements to nearly double capacity of plant at 3d and Washington Sts.; to include addition to present building, erection of 250-ft. smokestack, construction of parallel cooling tunnel connecting with river, additional unit of 15,000 K. W. capacity, etc.

Ky., Louisville.—Gas & Electric Co., capital \$30,000, inceptd. by Fred Letz, R. A. McDowell and J. V. Cooner.

Ky., Middlesboro.—City Commrs. considering plan to build electric-light plant.

Ky., Murray.—City contemplates constructing electric-light plant. Address The Mayor.

Ky., Murray.—City will vote on bonds to install electric-light plant. Address The Mayor.

Miss., Clarksdale.—City Commrs. let contract Dabbs & Wetmore of Meridian, Miss., to erect \$20,000 addition to power-house; W. G. Shurgar Engineering Co., Consult. Engr., Meridian, Miss.; M. W. Purnell, City Clerk. (Call for bids noted in December.)

Miss., Oxford.—City plans to install 150-kw. generator and engine, direct connected; issued \$6000 bonds. J. H. Lawshire, City Clerk. (Noted in Dec.)

Mo., Camden.—Missouri Gas & Electric Service Co., Richmond, Mo., plans to construct local distribution system. (This supersedes recent item.)

Mo., Chillicothe.—City will install 300-kw. generator, direct connected, to De Laval steam turbine; has let contract; P. J. Bixon, Supt.

Mo., Higginsville.—City contemplates voting on \$15,000 bonds to enlarge electric-light plant. Address The Mayor.

Mo., Mount Vernon.—City contemplates improving electric-light plant at cost of \$10,000. Address The Mayor.

Mo., Higginsville.—City votes Feb. 1 on \$15,000 bonds to improve electric-light plant; Ralph Hutscher, City Clerk.

Mo., Joplin.—City engaged A. C. Moore of Joplin, Consult. Engr., to prepare estimate of cost of building lighting plant and of rehabilitating present plant; plans expending \$100,000; Chas. A. Patterson, Commr. of Public Utilities. (Lately noted as contemplating \$100,000 bond issue.)

Mo., Warrenton.—Warrenton Electric Light, Ice & Power Co. contemplates constructing 6000-volt, 3-phase transmission line to Wright City; 8 mi.

Okla., Ardmore.—Southwestern Public Service Co., capital \$50,000, inceptd. by Jake L. Hamon of Ardmore, W. F. Kerr of Oklahoma City and F. L. Hamon of Weatherford, Tex.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Okla., Durant.—Durant Ice & Light Co. will construct high-tension electrical transmission line to Caddo, Okla.

Okla., Gotebo.—Gotebo Light & Power Co. will install 25-kva. generating unit and change system from direct to alternating current.

Okla., Mountain View.—City voted \$8000 bonds for electric-light plant. Address The Mayor.

Okla., Spiro.—City contemplates installing gas-engine unit in electric plant; H. R. Walder, Supt.

S. C., Winnsboro.—City has arranged with Georgia-Carolina Power Co., Augusta, Ga., to furnish electricity (from plant on Broad River) to operate municipal electric-light plant; power to be transmitted at 23,000 volts and stepped down to 230 volts, 60 cycles, through three 75-kva. transformers; T. R. Ellison, Supt.

Tenn., Dandridge.—John A. Walker purchased electric-light plant; is reported as considering plans to operate by water-power from Walker Mill.

Tenn., Humboldt.—City contemplates extending electric-light system to small towns within distance of 12 mi.; W. M. Case, Secy.-Mgr.

Tenn., Memphis.—International Electric Co. Incptd. by S. B. Corbitt, T. M. Upshaw and E. L. Russell.

Tenn., Nashville.—Nashville Railway and Light Co. will install sub-power station between West Nashville and West End car lines.

Tenn., Sevierville.—Sevierville Milling Co. will build lighting plant.

Tex., Bryan.—City is reported as contemplating construction of ornamental lighting system, consisting of 54 standards, on Main St. Address The Mayor.

Tex., La Porte.—La Porte Water, Light & Ice Co. contemplates constructing about 3 mi. transmission lines; has purchased poles.

Tex., Marble Falls.—M. M. Barry, lessee local electric-light and water plant, is reported to install machinery and make other improvements.

Tex., Marble Falls.—M. M. Barry, lessee of light and water plant, will install new machinery and make improvements.

Tex., McAllen.—McAllen's Public-Service Corp. let contract to erect brick building for electric-light plant; will expend \$25,000 for machinery.

Tex., Nocona.—Nocona Ice & Light Co. contemplates extensions and installation of additional oil engine in electric plant.

Tex., Pharr.—Pharr Ice, Light & Power Co. proposes increasing capacity of electric and ice plant.

Tex., San Angelo.—Crowther-Shield Electric Co., capital \$3000, incptd. by Lawrence Westbrock, J. E. Crowther and J. A. Shield.

Tex., Teague.—Teluride Power Co. will rebuild plant damaged by fire; cost about \$7500.

Tex., Troup.—Troup Light & Power Co. will install 50 H. P. oil engine and 40 K. W. generator.

W. Va., Cowen.—Walter Mills and J. S. Mills applied for franchise to install electric-light plant and lay water mains.

### FERTILIZER FACTORIES

Miss., Gulfport.—R. E. Johnson Fertilizer Co., capital \$10,000, incptd. by R. E. Johnson, J. C. Hardy, R. B. McGhee and W. H. Bouslog; continue established factory.

S. C., St. Matthews.—D. G. Ziegler, Son & Co., Engrs.-Archts., will organize company to build fertilizer factory, 30-ton cottonseed-oil mill and 15-ton ice plant; capital \$100,000. (See Machinery Wanted—Fertilizer Equipment; Oil Mill; Ice Plant.)

### FLOUR, FEED AND MEAL MILLS

Ga., Lawrenceville.—McElroy Milling Co. organized by R. F. Sammon and others; build 52x25 ft. 3-story structure of solid concrete; let contract to J. A. Poe, Lawrenceville; install machinery for roller flour mill. (Noted in December.)

Ga., Lawrenceville.—McElroy Milling Co. (R. F. Sammon and others) will build roller flour mill; 2 stories; 28x52 ft.; concrete; A. J. Pope, Lawrenceville, is in charge of construction. (Noted in Dec.)

Tenn., Lone Mountain.—Lone Mountain Milling Co. will rebuild flour mill reported burned at loss of \$20,000.

### FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Brakes.—Derailment Brake Co. increased capital from \$2000 to \$100,000; will remove main office from Cullman to Birmingham.

Ky., Louisville.—Machine Shop.—Gas and Electric Shop, capital \$30,000, incptd. by Fred Metz, R. A. McDowell and J. V. Conner.

Ky., Owensboro.—Pumps and Tanks.—Hull Pump & Tank Co., N. D. Hull, V.-P. and Gen. Mgr., proposes to establish plant for manufacturing pumps and tanks of all kinds; equipment to include lathes, boring mill, drill presses, gear cutters, punches, rolls, riveters, etc.; probably be in market within 30 days; this company mentioned in Nov. as organized with \$100,000 capital, etc. (See Machinery Wanted—Pump and Tank Works Equipment.)

Md., Baltimore.—Pumps.—George A. Boyden Pump Co., Geo. A. Boyden, Prest., Maryland Casualty Tower, has delayed building plans because of inability to obtain special machinery and tools required; leased local shop until plant is built; previously noted incptd., etc. (See Machinery Wanted—Pumps, etc.)

Mo., St. Louis.—Foundry.—Great Western Smelting and Refining Co. let contract J. Hill Construction Co. to erect one-story foundry and three-story warehouse at 3108-3122 N. Broadway; estimated cost \$50,000.

Tenn., Chattanooga.—Boilers.—Casey-Hedges Co. will build addition to plant; Chas. E. Bearden, Archt., 5th floor, First National Bank Bldg., Chattanooga.

Tenn., Oliver Springs.—Machine Shop.—Wm. Tedder of Rockwood, Tenn., and Tom Abson of Westbourne, Tenn., purchased and will enlarge local machine shop.

Tex., San Antonio.—Electric Machines.—Electroland Co., capital \$50,000, incptd. by Richard M. Craig, E. N. Phillips and Charles K. Smith.

Va., Newport News.—Diesel Engines.—Newport News Shipbuilding & Dry Dock Co. will build Diesel engines; H. L. Ferguson, Prest. and Gen. Mgr., writes to Manufacturers Record: "Have acquired right to build Werkspoor Diesel engines, one of the internal-combustion oil engines developed to a high state of efficiency; expect to engage in building these engines for marine work, both merchant and naval; have not yet started construction of any nor have we any particular development plans except to meet requirements for engines of any type."

### GAS AND OIL ENTERPRISES

Ark., Mansfield.—Rock Creek Oil & Gas Co., capital \$25,000, incptd. by J. M. Marshall, T. P. Edwards, C. H. Dixon and others.

Fla., Tampa.—Gas Mains.—Tampa Gas Co. will lay 10 mi. of gas mains; has ordered pipe.

Md., Baltimore.—Oil Storage.—Wm. C. Robinson & Son Co., 32 South St., let contract Singer-Pentz Co., 600 Equitable Bldg., Baltimore, for concrete foundation for building to be erected on Dock St. near Caroline; structure will be of frame and concrete. (Noted in Dec.)

Okla., Ardmore.—Pipe Line.—Southern Pipe Line Co., capital \$30,000, incptd. by Jake L. Hamon of Ardmore, W. F. Kerr of Oklahoma City and F. L. Hamon of Weatherford, Tex.

Okla., Blackwell.—Susquehanna Oil Co., capital \$25,000, incptd. by J. J. Thayer, W. L. Ralston and others.

Okla., Coalgate.—Monte Oil Co., capital \$5000, incptd. by Henry W. Marcum and others.

Okla., Drumright.—Rock River Oil Co., capital \$65,000, incptd. by Geo. Holt and others.

Okla., Durant.—Lone Oak Oil, Gas & Coal Co., capital \$100,000, incptd. by S. Akers, C. C. McCarthy and T. N. Reed.

Okla., Lawton.—Urbana Oil Co., capital \$10,000, incptd. by N. E. Robertson, Guy C. Robertson and others.

Okla., Muskogee.—Mono Oil Co., capital \$25,000, incptd. by Chas. R. Yancy, Henry M. White and Geo. H. Swan.

Okla., Okmulgee.—Naomi Oil & Gas Co., capital \$3000, incptd. by Jas. S. Moore and others.

Okla., Muskogee.—Mono Oil Co., capital \$25,000, incptd. by Chas. R. Yancy and others.

Okla., Sapulpa.—Grafeman Crude Oil and Gas Co. (Wm. Grafeman and others), St. Louis, Mo., purchased oil and gas leases on 200-acre tract in Glenn Pool oil field; now

has about 1600 acres oil leases in five oil fields in Southwest.

Okla., Strong City.—Roll Development Co., capital \$50,000, incptd. by S. Walker, W. E. Fisher and T. F. Brazell.

Okla., Tulsa.—Prior Oil & Developing Co., capital \$2400, incptd. by J. H. Winemiller, Alva J. Niles and L. W. Baxter.

Okla., Tulsa.—Chinqua Oil & Gas Co., capital \$8000, incptd. by P. B. Elkins and others.

Okla., Tulsa.—Double Drilling Co., capital \$10,000, incptd. by W. A. Campbell and others.

Okla., Tulsa.—Penn-York Oil Co., capital \$10,000, incptd. by R. F. Ford of Oklahoma City and others.

Okla., Tulsa.—Chinqua Oil & Gas Co., capital \$8000, incptd. by P. B. Elkins, Pierce Larkin and F. E. Shallenberger.

Okla., Wauwette.—Pat Murphy Oil & Gas Co., capital \$15,000, incptd. by E. K. Allie, A. L. Beckner and others.

Tex., Houston.—The Texas Co., Houston and 17 Battery Place, New York, will increase capital from \$57,000,000 to \$141,000,000; continue developments and enlarge operations; leased Sewall shipyards at Bath, Me., and will utilize to construct vessels for its oil trade.

Tex., Houston.—Dixie Oil & Gas Co., capital \$15,000, incptd. by J. C. Fox, H. Wilson and C. W. Dickson.

Tex., Houston.—Central Petroleum Co., capital \$25,000, incptd. by C. L. Smith, J. J. Fenn and W. C. Crow.

Tex., Houston.—Queen Oil Co., capital \$100,000, incptd. by W. N. Bullard, T. H. Dennis, H. J. DuBois, J. T. Sraig and George L. Wilson.

Tex., Orange.—Orange Petroleum Co., capital \$25,000, incptd. by W. H. Stark, E. W. Brown and L. Miller.

Tex., Petrolia.—Findley-Minnick Oil & Gas Co., capital \$10,000, incptd. by A. E. Findley, R. E. Pipper and C. E. Minnick.

Tex., San Antonio.—Fuchs Oil Co. increased capital from \$25,000 to \$100,000.

W. Va., Cameron.—Loudenville Oil & Gas Co., capital \$100,000, incptd. by J. B. Allison, Geo. Watson and others.

W. Va., Wheeling.—Manufacturers' Light & Heat Co. is reported as considering establishment of gas pumping station in Buffalo Dist. field.

### HYDRO-ELECTRIC PLANTS

Ga., Cedartown.—Georgia Ry. & Power Co., Atlanta, will extend electrical transmission service to Cedartown, as lately stated; extension from Atlanta-Lindale line to Cedartown; construction by own line department.

N. C., Morganton.—H. L. Millner and associates purchased water-power site on Catawba River, 15 mi. west of Morganton; made surveys and plans; arranged financial details; signed contract for construction dam and power-house.

N. C., Morganton.—Southern Power Co., Charlotte, N. C., is acquiring lands, water-power sites, etc., on upper Catawba River, above Morganton, Rhodhiss, etc.; plans regulation of Catawba's flow; in future will build dam and power-house across Catawba or one of its tributaries; water passing this plant when released in time of low water will increase flow of river so that it will pass through company's plants at Lookout Shoals, Catawba, Fishing Creek and Rocky Creek; present developments are generating 141,000 electrical HP.; these are at Lookout Shoals, 12 mi. west of Statesville, N. C., 30,000 HP.; Catawba Station, near Rock Hill, S. C., 10,000 HP.; Fishing Creek, below Chester, S. C., 37,000 HP.; Great Falls, 32,000 HP.; Rocky Creek, 32,000 HP.; undeveloped sites will increase the 141,000 to more than 200,000 HP.

Tenn., Cave.—Cave Water & Power Co. is changed from partnership to corporation for further developing hydro-electric plant; latter develops 50 H. P. and cost \$5000; J. M. Taylor, managing official. (Lately noted incptd. with \$5000 capital by J. M. Taylor and associates.)

### ICE AND COLD-STORAGE PLANTS

Ala., Gadsden.—Alabama City, Gadsden & Attalla Ry. Co. will install additional ice machine in local plant; ordered equipment.

Fla., St. Petersburg.—Co-Operative Ice Co. incorporated with \$50,000 capital by W. C. White and others.

Ga., Macon.—Macon Brewing Co. will convert portion of brewery into ice plant; has all equipment. (Lately noted to increase daily capacity of ice plant from 50 to 100 tons.

Md., Baltimore.—Baltimore Cold-Storage Co., Jas. C. Leib, Prest., let contract Morrow Bros., Fidelity Bldg., Baltimore, to enlarge and improve building at 21-23 E. Pratt St.; erect 6-story brick addition, providing 800,000 sq. ft. cold-storage space; install ice-manufacturing and cold-storage machinery; Nicholas Van R. Greene, Engr., New York. (Lately noted.)

Md., Federalsburg.—Cambridge Ice Co., Cambridge, Md., is reported to have purchased Federalsburg Ice Co.'s plant and to enlarge.

Md., Harlock.—Cambridge Ice Co., Cambridge, Md., is reported to have purchased Harlock Ice Co.'s plant and to enlarge.

N. C., Mooresville.—W. N. Johnston Sons Co., capital \$100,000, incptd. by H. N. Johnston, W. R. Johnston, C. R. Johnston and others.

S. C., St. Matthews.—D. G. Ziegler, Son & Co., Engrs.-Archts., will organize company to build 15-ton ice plant, 30-ton cottonseed-oil mill and fertilizer factory; capital \$100,000. (See Machinery Wanted—Ice Plant; Oil Mill; Fertilizer Equipment.)

Tenn., Clifton.—Clifton Ice Co. will rebuild ice-plant and planing mill reported burned at loss of \$20,000.

Tex., Crockett.—Crockett Ice, Electric Light & Power Co. contemplates installing 150 H. P. horizontal tubular boiler and rebuilding cooling tower and hoisting apparatus for loading ice from cold-storage room into rail cars.

Tex., Elgin.—Company organized with \$15,000 capital to build ice plant; Jesse Lincoln, Chmn., of committee to purchase machinery, secure site, etc.

Tex., La Porte.—La Porte Water, Light & Ice Co. contemplates installing 15-ton ice plant; raw-water system.

Tex., Pharr.—Pharr Ice, Light & Power Co. proposes increasing capacity of ice and electric plant.

### IRON AND STEEL PLANTS

La., New Orleans.—Rolling Mill.—New Orleans Steel & Iron Co. organized with \$100,000 capital; office at 610 Audubon Bldg.; W. B. Seidel, Prest.; Chas. Bedell, V.-P.; D. J. Reiley, Secy.-Mgr.; build 300x100-ft. structural-iron shed; install 20-in. muck mill, 10-in. merchant mill, engines, boilers, etc.; daily capacity, 40 tons bar and structural iron. (Lately noted organized to build rolling mill, etc.)

N. C., Salisbury.—Iron Furnace, etc.—North Carolina Steel & Iron Co., capital \$50,000, incptd. by P. H. Thompson, John S. Henderson and Ray P. Thompson; manufacture iron and steel.

Tenn., Clifton.—Iron Furnace.—Bon Air Coal & Iron Co., Nashville, Tenn., is reported as planning to blow iron furnace.

### IRRIGATION SYSTEMS

Ark., Deval Bluff.—Grand Prairie Canal Co. organized with \$300,000 capital by L. T. Mount of Mesa, Ark., and others; construct irrigation canal to provide water from White River to further rice-growing industry on Grand Prairie; main canal will tap White River 3 mi. above Deval Bluff and extend south to within 2 mi. of Stuttgart, Ark., distance of 23 mi., according to survey; 3 laterals; irrigate 25,000 acres rice lands, and ultimately is expected to furnish water for much of Grand Prairie, which is 90 mi. long and about 20 mi. wide; build pumping station on White River to lift water 60 ft. into canal; excess water to be carried off in small streams which canal will cross.

### LAND DEVELOPMENTS

Ala., Bay Minette.—Seminole Development Co., capital \$4000, incptd. by John B. Wiggins and associates.

Ark., Wheatley.—Little Prairie Rice Co., capital \$60,000, incptd. by H. K. Smith, Alex. Lendrum, E. D. Norton and others.

Fla., Bradentown.—Southern Cattle Feeding Co., Columbus, Ohio, purchased 20,000 acres and will plant 6000 acres in velvet beans, natal hay, Japanese cane, potatoes and rice.

Fla., Jacksonville.—Viking Fruit Co., 45 St. James Bldg., will hold meeting Feb. 10 to consider increase in capital to \$50,000.

Fla., St. Lucie.—Edwin P. Ansley of Atlanta, Ga., is reported to develop 2300 acres of land surrounding St. Lucie, Fla., as tourist and commercial center.

La., Lafayette.—City contemplates voting on \$15,000 bonds for public park and playground improvements. Address The Mayor.



Mo., St. Louis.—Sanders Nursery Co., capital \$10,000, inceptd. by Carew C. Sanders and others.

N. C., Charlotte.—Piedmont Land Co., capital \$125,000, inceptd. by B. D. Heath, J. J. McInaney and T. M. Barnhart.

N. C., Wilmington.—City will develop about 12 acres as park. Address The Mayor.

Va., Petersburg.—Walnut Hill Annex Co., capital \$25,000, inceptd.; LeRay Roper, Pres.; J. G. Tyler, V.-P.; W. A. Whaley, Secy.-Treas.

Va., Roanoke.—Washington Heights Cemetery Co., capital \$30,000, inceptd.; J. H. Burks, Pres.; Hunter Terry, Secy.

Va., Roanoke.—Villanova Park Corp., capital \$20,000, inceptd.; A. S. Petty, Pres.; D. W. Persinger, Secy.-Treas.

W. Va., Huntington.—Boone County Land Co., First National Bank Bldg., inceptd. with \$10,000 capital by Chas. H. Bronson, R. P. Eubank, Harry L. Broh and others.

## LUMBER MANUFACTURING

Ala., Birmingham.—Estes Lumber Co. increased capital from \$3000 to \$3500.

Ala., Douville.—McMillan Bros., Bay Millette, Ala., purchased timber rights and will build sawmill.

Ala., Gadsden.—Southern Mfg. Co. plans improvements and extensions to cost \$10,000; purchased machinery for band-saw mill; daily capacity 25,000 ft.; will install individual electric motors to operate machinery; also build brick warehouse, 150x150 ft.

Ala., Tuslaw.—Martin Lindsey, Mobile, purchased timber rights on tract of pitch pine timber in Baldwin county; reported that J. T. Wilson of Mobile has leased part of tract for turpentine purposes. (This is in addition to tract lately noted purchased at Bromley.)

Ala., Toinette.—Toinette Lumber Co., capital \$10,000, inceptd.; W. T. McGowan, Pres., Toinette; W. G. McGowan, Secy.-Treas., Jackson, Ala.; has rebuilt plant of Cochrane Lumber Co. and will specialize in railroad bridge and export timbers, yellow-pine ceiling, flooring and car decking.

Ark., Bruins.—Lansing Co., Lansing, Mich., advises Manufacturers Record that lately noted report regarding purchase of 8000 acres timber land at Bruin is incorrect; no timber purchased since summer.

Ark., Hamburg.—Hamashark Box & Lumber Co. will rebuild planing mill and shook factory recently burned; new planing mill larger than former plant; later, possibly about Oct., will rebuild box shook factory.

Ark., Mena.—Serozzins Lumber Co., capital \$25,000, inceptd. by A. H. and C. P. Serozzins and W. W. McGregor.

Ga., Norwood.—J. H. Steedman Lumber Co. organized with L. B. Lovelace, Pres., Henrietta, N. C.; J. H. Steedman, Secy., Sharon, Ga., and C. M. Young, Mgr., Round Oak, Ga.; will install planing mill; purchased machinery. (Lately noted inceptd. with \$15,000 capital.)

Ga., Savannah.—Producers' Lumber Co., capital \$50,000, inceptd. by R. E. L. Coleman, Geo. Urquhart and others.

Ky., Pike County.—Yellow Poplar Lumber Co., Coal Grove, Ohio, will develop timber tract along John's Fork of Big Sandy River in Pike county; proposes to expend \$100,000 to build 15-mi. branch narrow-gauge lumber road; at present will market 500,000 trees; later may develop additional tracts of about same amount; rough logs will be shipped to mills at Coal Grove.

Ky., Uvah.—J. B. Horner, representing Kentucky Vencer Co., Louisville, Ky., acquired W. B. Lusk timber tract and will develop.

La., Collinston.—Kerlin & Brunston Lumber Co., Bryceand, La., purchased yellow pine stumpage near Collinston and will build saw mill; probably use present equipment.

La., Jonesville.—E. A. Wilson will rebuild saw and shingle mill reported burned.

Miss., Natchez.—D. K. Jeffries Lumber Co. will improve plant; increase daily capacity from 60,000 to 100,000 ft.

Miss., Hovey.—Pine Export Lumber Co. will rebuild burned drykilns; let contract Standard Drykiln Co., Indianapolis, Ind.

Mo., St. Louis.—Henry O'Neil Mill & Lumber Co., capital \$5000, inceptd. by Henry O'Neil and others.

N. C., Weldon.—Florence Lumber Co., capital \$50,000, inceptd. by A. C. House, H. C. House and Thel W. House.

Okla., Eldorado.—Eldorado Lumber Co., capital \$15,000, inceptd. by Geo. B. Davis, Fred Williams, D. C. Buck and others.

Okla., Quapaw.—Quapaw Lumber Co., capital \$5000, inceptd. by W. B. Hamilton of Af-

ton, Okla.; R. C. Deck and B. D. Whitestone of Seneca, Mo.

Okla., Tyrone.—Equity Lumber & Supply Co., capital \$10,000, inceptd. by J. W. French and others.

S. C., Rimini.—Booth-Parker Lumber Co. organized by J. P. Booth of Sumter, T. H. Parker of Dalgell, S. C., and H. E. Parker of Dillon, S. C.; purchased timber rights on 965 acres in Clarendon county and will install sawmill.

S. C., Rimini.—Booth-Parker Lumber Co., Sumter, S. C., purchased pine timber tract; will build sawmill, planing mill and drykiln; ordinary sawmill construction; daily capacity 30,000 ft. dimension lumber and 5000 to 10,000 ft. kiln-dried rough boards and roofers.

Tenn., Bearden.—Colonial Lumber Co. inceptd. by T. J. Wyrick, Berney Henry, W. E. Cooper, C. J. McClung and J. D. Wyrick, Mgr.; purchased large tract of standing timber and will develop. (See Machinery Wanted—Flooring, etc.)

Tenn., Clifton.—Clifton Ice Co. will rebuild planing mill and ice-plant reported burned at loss of \$20,000.

Tex., Hemphill.—Hiram Knox, Pres., Lufkin-Hemphill & Gulf Ry. Co., will build sawmill costing \$300,000; daily capacity 125,000 ft.; has let building contract to C. H. Williams of Hemphill and machinery contract to J. D. Murry of Warsaw, Wis.

Va., Petersburg.—Powell Lumber & Supply Co., capital \$25,000, inceptd.; Raleigh C. Powell, Pres.; T. J. Gills, Jr., V.-P.; R. T. Wilson, Secy.-Treas.

Va., Richmond.—Powell Lumber & Supply Co., capital \$25,000, inceptd.; Raleigh C. Powell, Pres.; F. J. Gills, Jr., V.-P.; R. T. Wilson, Secy.-Treas.

W. Va., Roncoveite.—Meadow River Lumber Co. purchased 10,000 acres timber land on Meadow River in Greenbrier and Fayette counties and will develop.

## METAL-WORKING PLANTS

D. C., Washington.—Steel Wheels.—Wishbone Steel Wheel Co., capitalization \$500,000, inceptd. by J. Worth Carnahan, 332-34 C St. N. W.; Clarence J. Clements, A. L. Haycock, A. M. C. Hudson and M. T. Wallingford.

Md., Baltimore.—Tin Plate.—J. E. Aldred, 24 Exchange Place, New York, Chrmn. of Consolidated Gas, Electric Light and Power Co., Baltimore, plans organization company, capitalized at \$2,000,000, to build tin plate factory on river front. He wires Manufacturers Record: "Impossible to give particulars regarding tin plate mill at this time."

Md., Baltimore.—Copper.—Baltimore Copper Smelting & Rolling Co., 4th Ave. and 5th St., will build additions to plant; Wm. H. Pelree, V.-P., advises Manufacturers Record: On land recently purchased (from Canton Iron & Steel Co.) it is intended to construct house in which to place tanks for electrolytic treatment of copper to extent of 4000 to 5000 tons per month; contracts for construction of buildings and machinery have been let. Will erect four steel-frame and brick-wall buildings on concrete foundations; two 477x78 ft.; two 220x78 ft.; provide cranes; taking bids separately; let contract McClintic-Marshall Construction Co., Pittsburgh, Pa., for structural steel work; Raymond Concrete Pile Co., 425-427 Munsey Bldg., and Sanford & Brooks, Commerce and Water Sts., both of Baltimore, are estimating on piling.

Mo., St. Louis.—Iron and Metal.—A. Wolf Iron and Metal Co. increased capital from \$3000 to \$30,000; will increase yard and re-handling equipment.

Mo., St. Louis.—Sheet-metal Products.—Fred Medart Mfg. Co., 3535 De Kalb St., will build 260x100-ft. structure costing \$40,000; partly fireproof and partly mill construction; Wm. B. Ittner, Archt., St. Louis; install machinery to manufacture sheet-metal products; Phil. S. Medart, V.-P. and Engr.

## MINING

Ark., Cotter.—Zinc.—Commercial Mining Co., capital \$5000, inceptd. to develop zinc property; J. F. Brummitt, Pres., Mountain Home, Ark.; C. B. Forsythe, V.-P.; W. F. Albright, Secy.-Treas.; each of Batesville, Ark.

Ark., Rush.—Zinc.—R. M. Fletcher of R. M. Fletcher Stave & Lumber Co., Pine Bluff, Ark., expects to organize company for developing zinc property; lately noted as buying property in Rush Dist. (See Machinery Wanted—Mining Machinery.)

Fla., Bartow.—Phosphate.—The Phosphate Mining Co. purchased 2500 acres phosphate property for development.

Ga., Gordon.—Bauxite and Kaolin.—Columbin Kaolin & Aluminum Co., Fred S. Swindell, Pres., 708 14th St. N. W., Washington, D. C., completed plans for developments; engaged Richard K. Meade, Engr., 202 N. Calvert St., Baltimore, Md.; informs Manufacturers Record: Invest about \$150,000 in development; build narrow-gauge railroad from deposits to Gordon, 3 mi. distant; about 4000 acres near Gordon, McIntyre and Irvington; large deposits of kaolin and bauxite, latter lying on top; plant site adjacent to Gordon; build plant to dry bauxite, wash and prepare clay and to manufacture alum; concrete construction wherever possible; machinery to include tunnel dryers, employing waste steam, and will be electrically driven; daily capacity to be 100 tons kaolin, 50 tons bauxite and 5 tons alum; this company's organization, with \$600,000 capital, etc., mentioned in September. (See Machinery Wanted—Clayworking Machinery, etc.)

Mo., Duenweg.—Lead and Zinc.—Franklin Mining Co. will open additional shaft; build 200-ton hopper, etc.

Mo., Joplin.—Lead and Zinc.—Missouri Lead and Zinc Co. will install pumping-plant on mining property; has total of 1160 acres.

Mo., Joplin.—Lead and Zinc.—Ruby Fern Mining and Milling Co., capital \$6000, inceptd. by J. C. Flannigan and S. T. Stum of Joplin, H. Levi of Kansas City, Mo., and others.

Mo., Joplin.—Lead and Zinc.—S. Wells Mining Co., capital \$50,000, inceptd.

Mo., Joplin.—Lead and Zinc.—Stark City Mining Co., capital \$3000, inceptd.

Mo., Versailles.—Zinc.—Rock Creek Zinc Mining Co., Fred Van Nordstrand, plans investment additional capital for installation zinc-mining equipment.

N. C., Charlotte.—Gold, etc.—Consolidated Sale, Mining & Mfg. Co., capital \$1,000,000, inceptd. by J. Frank Wilkes, M. Groenendyke and others to mine gold, silver, copper, etc.

Okla., Price.—Sand.—Price Sand Co. will install electrical machinery to replace equipment washed away by flood; daily capacity plant, 30 carloads sand.

Tenn., Bristol.—Zinc.—Southern Zinc Co. of New York, represented by S. V. Fulkerson of Bristol, purchased several tracts of zinc property in Washington and Sullivan counties; probably operate old plant of former zinc company at Fall Branch; J. H. Banks of New York is Engr.

Tex., Orin.—Sulphur.—Michigan Sulphur & Oil Co. chartered with \$300,000 capital; develop 80-acre sulphur deposit 19 mi. from Orin; Eugene J. Russell, Pres.; Ralph Eastman, Secy.-Treas.; W. A. Doyle (formerly of Seattle), Engr.-Mgr.; all of Dallas, Tex.; constructing road from Orin to mine; ordered 20 carloads equipment costing \$75,000; plans include installation 2 cylinders, 32 ft. long by 6 ft. diam., each having capacity 5 to 6 carloads ore; force steam at 250 to 280 lbs. pressure into cylinders to melt sulphur; liquid sulphur to be molded into 100-lb. cakes; other machinery will include 2 60 H. P. boilers, at first using wood for fuel and later using natural gas; proposes constructing dam to conserve water from 1,000,000-acre watershed to furnish water for sulphur plant.

Va., Ripplemead.—Stone, etc.—Southwestern Stone & Lime Co., W. W. McElrath, Jr., Gen. Mgr., East Radford, Va., will establish quarry and crusher plant for 1500 tons daily capacity; equipment to include boilers, engines, pumps, crushers, screens, etc.; lately noted inceptd. with \$100,000 capital. (See Machinery Wanted—Crusher Plant, etc.)

## MISCELLANEOUS CONSTRUCTION

Ala., Alabama Port.—Coaling Station, etc. Tidewater Securities Corp., Mobile, plans beginning developments; J. M. Dewberry, president, Mobile and Birmingham, advises Manufacturers Record: Immediate plans contemplate completion railroad from Mobile & Ohio R. R. terminus at Alabama Port to Cedar Point; this railway nearly completed; also extension to Dauphin Island and to site of proposed coaling station on east end of island; at completion of railroad expects to have 32 ft. of water at coaling station docks and equipment for handling 500 tons coal per hour from barges or cars to ships' bunkers; 40-room hotel, cost between \$30,000 and \$50,000, also in immediate prospect; establish electric-light plant and extend waterworks. (Previously mentioned.)

Ark., Little Rock.—Chicago, Rock Inland & Pacific Ry., I. L. Simmons, Bridge Engr., Chicago, completed plans for construction concrete subway at 6th St.; construct abutments for ultimate development four tracks; provide only two tracks at present; columns and cross girders of reinforced concrete and

cross girders will probably be cast in place; slabs cast to one side and set after other masonry has been placed. (Previously noted.)

Ky., Winchester.—Swimming Pool, etc.—Arthur P. Brown of Americus, Ga., and Chas. H. Shuler of Port Republic, Va., are reported to construct swimming pool, install heating plant, construct dam and impound salt water in lake in connection with development of Olympian Springs property.

La., Alexandria.—Lumber Mat.—Red River, Atchafalaya & Bayou Boeuf Levee Dist. Comms., Howard B. Gist, Secy., will provide subaqueous lumber mat for bank protection in Rapides parish; 1100 ft. of Red River; receive proposals until Feb. 16; blank forms, information, etc., on application to Board State Engrs., New Orleans. (See Machinery Wanted—Lumber Mat.)

Md., Baltimore.—Coal Pier.—Pennsylvania R. R. Co., A. C. Shand, Ch. Engr., Philadelphia, has begun construction coal pier; advises Manufacturers Record of final details; daily facilities for loading 30,000 tons coal into vessels; pier 90x66 ft.; built on crescent piles with reinforced concrete floor and concrete bulkhead; space for loading 4 vessels at once, utilizing both sides of pier; to facilitate winter handling, will have thawing-house with capacity 30 cars; steam thawing equipment; cars pushed from yard up on "kick-back," from which they will ascend by gravity to dumper; here picked up and turned over, emptying coal into hopper; under hopper will be 4-ton cars operated by endless cable up an incline and out on trestle along center of pier; traveling unloaders on both sides of trestle; small cars dumped automatically into hoppers on these unloaders; coal then elevated by conveyor to telescopic chutes lowered into vessels; storage bins at end of pier for local harbor trade; boats loaded by small traveler; storage yard having capacity 1000 cars; coal cost about \$1,000,000; Maryland Dredging & Contracting Co., Baltimore, has contract for dredging at dock and grading yard; Arthur McMullen Co., New York, will build pier; Mead-Morrison Mfg. Co., Chicago, will furnish pier machinery. (Previously mentioned.)

Tex., Galveston.—Coal-storage Plant.—Clinchfield Fuel Co., 24 Broad St., New York, and Spartanburg, S. C., completed arrangements for coal-handling facilities; C. E. Bockus, Pres., New York, advises Manufacturers Record of following details: Company has let contracts for building coal-storage loading and unloading equipment; secured lease (from Galveston Wharf Co.) on 400-ft. wharf in center of city; will have storage capacity 25,000 tons of coal; coal-handling apparatus designed by Lidgerwood Mfg. Co., New York; operate plant in conjunction with barge recently built at Clooney yards, West Lake, La., with dragline bucket and conveyor for handling coal into steamers' bunkers; floating equipment includes 2 other barges, 1 to be equipped with devices bunkering steamers; continue to maintain bunker coal at Texas City.

Tex., Gatesville.—Heating Plant.—George Leavy, State Purchasing Agent, Austin, Tex., let contract A. M. Lockett, Ltd., of Houston, Tex., at \$5600 to install heating plant in new building at State Training School for Juveniles at Gatesville.

Tex., Galveston.—Boat Basin.—Government will construct boat basin at Quarantine Station; bids until Feb. 15; specifications on application to Custodian of Station or to Treasury Dept., Jas. A. Wetmore, Acting Supvr. Archt., Washington, D. C. (See Machinery Wanted—Boat Basin.)

Va., Hopewell.—Wharf.—E. J. Cartwright is reported to have purchased frontage of 250 ft. on Appomattox River and to build wharf costing \$220,000.

## MISCELLANEOUS ENTERPRISES

Ala., Eufaula.—Hardware.—Eufaula Hardware Co., capital \$25,000, inceptd. by H. C. Hollman, S. A. Bullock, O. C. Mitchell and J. W. Drewry.

Ala., Montgomery.—Grain Elevator.—H. M. and R. M. Hobble plan to build grain elevator costing \$50,000; Fred Ausfeld, Archt., Montgomery.

Ark., Helena.—Hardware.—McRae Wholesale Hardware Co., capital \$50,000, inceptd.; H. E. McRae, Pres.; W. N. Straub, V.-P.; C. B. Luke, Secy.-Treas.

Fla., Sarasota.—Asphalt Contracting.—United Asphalt & Construction Co. organized; undertakes all kinds of street paving and general construction; has asphalt-mixing plant and complete contractors' outfit; has under contract 75,000 sq. yds. asphalt paving in Florida. (Lately noted inceptd. with \$10,000 capital.)

Fla., Tallahassee — Livestock. — Yaeger-Stuckey Livestock Co., capital \$10,000, incorporated; L. C. Yaeger, Pres.; J. W. Stuckey, V.P.

Ga., Atlanta—Laundry.—Capital City Laundry, Geo. Saust, Pres., will erect 105x38-ft. ordinary-construction building for plant; open building bids after Feb. 15; install machinery for rug cleaning; Walker & Chase, Architects, Candler Bldg., Atlanta. (Lately noted as having plans prepared, etc.)

Ky., Ashland — Automobile Accessories.—Automobile Accessory Co., capital \$100,000, inceptd. by J. G. Scott, W. N. Burke and G. C. Scott.

Ky., Ashland—Roller Coaster.—Glen Echo River Coaster Co., capital \$20,000, inceptd. by John Russell, Proctor K. Mallin and others.

Ky., Louisville—Printing.—Ridsdale Bros. inceptd. by R. D. Ridsdale and associates.

Ky., Winchester — Resort, etc.—Arthur P. Brown of Americus, Ga., and Chas. H. Shuler of Port Republic, Va., are reported to have purchased Olympian Springs and to develop; understood to bottle mineral water, remodel hotel as sanatorium, install heating plant, construct swimming pool, construct dam and impound salt water in lake.

La., New Orleans—Grain Elevator.—Port Comms., Ernest M. Loch, Pres., let following contracts for construction and equipment of grain elevator, bids lately noted to be opened Dec. 29: Janse Bros., building and equipment; A. M. Lockett & Co. of New Orleans (representing Diamond Rubber Co. of Akron, O.), 15,000 lin. ft. elevator and conveyor belting; Huntley Mfg. Co., Silver Creek, N. Y., 1200 to 3500-bus.-per-hr. elevator separator and clippers, including 1500-bus.-per-hr. oat clipper; Fairbanks Co., New York, seven 2000-bus. grain hopper scales; Otis Mfg. Co., New York, 2000-lb. capacity electrically operated freight elevator; Ford, Bacon & Davis, Engrs., 921 Canal St., New Orleans, (Doullutt & Williams of New Orleans were noted in Dec. under Miscellaneous Construction as securing contract at \$188,000 to construct 1350x12-ft. grain elevator wharf; Jefferson Construction Co., New Orleans, was contractor at \$38,322 to construct pile foundations for first structures of grain elevator, as reported in September.)

Mo., Canton — Ferry.—Canton Ferry Co., capital \$4000, inceptd. by A. B. Nelson, J. W. Lillard and F. C. Millsbaugh; operate steam ferry on Mississippi River.

Mo., St. Louis—Construction.—Leigh-Metz Realty & Construction Co., capital \$5000, incorporated by H. W. and J. W. Leigh of St. Louis and H. C. Metz of Normandy, Mo.

N. C., Moravian Falls—Publishing.—Yellow Jacket Co., capital \$32,000, inceptd. by A. T. Abernathy, Barney Laws, Shafter R. Laws and others.

Okla., Mene — Grain Elevator. — Farmers' Elevator Co., capital \$5000, inceptd. by Wm. Marsh, Peter Uruh, C. E. Carlson and others.

Okla., Tulsa—Construction.—Bradley-Boydell Construction Co., capital \$10,000, inceptd. by John S. Bradley, E. A. Bradley and P. H. Moroney.

S. C., Hampton — Publishing. — Hampton County Herald, capital \$3000, inceptd.; Randolph Murdaugh, Pres.; S. M. Clarke, V.P.; B. R. Holr, Secy.; J. S. Williams, Treas.

Tenn., Chattanooga — Printing and Engraving.—N. H. Grady will erect building to be occupied by Chattanooga Printing & Engraving Co.; structure to be 1 story; 66x108 ft.; cost \$6000; Clarence Jones, Archt.; Luther Chambers, Contr.

Tenn., Memphis—Grain Elevator.—Gillette Grain Co., Nashville, let contract Burrell Engineering & Construction Co. of Chicago to build grain elevator; concrete and corrugated iron; 122 ft. high; capacity 100,000 bus.; 6 concrete storage tanks in addition to elevator; proposes to have ultimately elevator of 500,000 bus. capacity. (Lately noted.)

Tenn., Nashville—Printing.—Benson Printing Co., capital \$50,000, inceptd. by John T. Benson, J. R. Green, W. E. Norvell, Jr., and others.

Va., Norfolk—Engineering, etc.—Federal Co., capital \$10,000, inceptd.; E. Hart, Pres.; J. B. Wheaton, V.P.; W. W. Lower, Secy.-Treas.

Va., Petersburg—Roofing, etc.—Williams Roofing Co., capital \$10,000, inceptd.; A. F. Williams, Pres.; W. F. Barner, V.P.; R. C. Syme, Secy.-Treas.

Va., Richmond—Roofing and Plumbing.—Williams Roofing & Plumbing Co., capital \$10,000, inceptd.; A. F. Williams, Pres.; W. F. Barner, V.P.; R. C. Syme, Secy.-Treas.

W. Va., Chester — Publishing. — National Church Supply Co., capital \$5000, inceptd. by

Geo. W. Merschrod, Robt. Parker, Laura G. Parker and others.

### MISCELLANEOUS FACTORIES

Ala., Birmingham—Fireworks.—J. Sanders Gordon of North American Fireworks Display Co., St. Louis, Mo., is reported as considering establishment of fireworks factory.

Ala., Seale—Peanut Products.—Seale Peanut Products Co., First National Bank Bldg., organized with \$25,000 capital; H. T. Benton, Pres.; E. M. Anderson, V.P.; T. W. Anderson, Secy.-Treas.; will build mill to manufacture peanut products. (Lately noted.)

Ala., Tensaw—Turpentine.—J. T. Wilson of Mobile, Ala., is reported to have leased timber for turpentine purposes. See Lumber Manufacturing.)

Fla., Jacksonville—Pianos.—Seminole Piano Mfg. Co., capital \$40,000, inceptd.; W. A. Barfield, Pres.; J. H. Barfield, V.P.; L. Smoak, Secy.-Treas.

Fla., Jacksonville—Motion-picture Studio. Palm Motion Picture Co. is reported as having plans prepared for plant on river front; studio of stucco; stage to extend from studio to edge of river; part of studio for developing and printing films; also proposes electric-light plant.

Fla., Marianna—Peanut Oil.—N. F. Thompson and J. Virgil Smith, Birmingham, Ala., plan to build peanut oil mill.

Fla., Tampa—Motion-Picture Studio.—National Film Corp. of America let contract Curtis & Glynn, Tampa, to erect 200x300-ft. studio bldg.; frame construction.

Fla., Tampa—Tropical Clothing.—Warren E. Smith, 51 Seaview Ave., South Norwalk, Conn., contemplates establishing plant to manufacture men's tropical clothing; equipment is mainly sewing machines; considering Tampa, but may locate elsewhere.

Fla., Tarpon Springs—Bottling.—Geo. Cat-simigos will build bottling plant.

Ga., Atlanta—Inner Tubes.—N. C. Doss of Rome, Ga., is reported as planning \$250,000 company to manufacture puncture-proof inner tubes for automobiles.

Ga., Atlanta—Candy.—Norris, Inc., will occupy \$150,000 building to be erected by Mrs. L. W. Evans; 50,000 sq. ft. space in rear; 5 stories; reinforced concrete and steel construction; rat and vermin proof; packing and dipping rooms sterilized with ozone; each floor of cement and pulverized steel composition, insuring absence of dust; light, heating and refrigerating plant; construction contract let to Mackle Construction Co., Atlanta; Hentz, Reid & Alder, Architects, Atlanta.

Ga., Lafayette—Creamery.—Walker County Co-operative Creamery, capitalization \$5000; Thos. Shaw, Pres.; J. E. Patton, Secy.-Treas.; will build 28x55-ft. structure with lean-to for machinery-room and cold storage 14x40 ft. on one side; upper portion of frame, with patent roofing; concrete floors; 3-ft. wall around outside; cost about \$1800; install churn and butter worker of 800 lbs. capacity, refrigeration facilities, etc., costing \$2700.

Ky., Highland Park—Carbons, etc.—Kentucky Ribbon & Carbon Co., inceptd. by W. P. Smith, Jas. Dawson and others.

Ky., Louisville—Bottling.—Coca-Cola Bottling Works, capital \$20,000, inceptd. by Fred S. Schmidt and others.

Ky., Louisville—Adler Mfg. Co., capital \$50,000, inceptd. by C. L. Adler and others.

Ky., Louisville—Surgical Dressing.—Vulco Mfg. Co., capital \$25,000, inceptd. by Gordon L. Curry, J. W. Campbell and others; to manufacture chemical compound for surgical dressing and antiseptic.

Ky., Louisville—Razor-sharpening Device. Steedman Co., capital \$1200, inceptd. by Dr. Jas. B. Steedman, Louis Summers and J. C. Cox.

Md., Baltimore — Charcoal, etc.—Thomas Bros. & Klein, 1st Ave. and 2d St., will rebuild charcoal and chicken-feed plant lately noted burned; 110x50x7½-ft. buildings; not decided whether to be of frame or brick.

N. C., Raleigh—Syrup.—Carolina Syrup Co., capital \$10,000, inceptd. by A. S. Murphy, Ken F. Hagan and A. F. Duckett.

Miss., Columbus—Creamery.—A. H. Taylor, Mgr. Okolona Creamery Co., Okolona, Miss., will establish creamery; lately noted. (See Machinery Wanted—Boiler; Creamery Equipment; Pulleys, etc.)

Mo., Kennett—Incubators.—Porter Electric Incubator Co., capital \$6000, inceptd. by W. B. C. Porter and others.

Mo., Poplar Grove — Shoes.—Hamilton-Brown Shoe Co. of St. Louis, Mo., is reported as contemplating establishment of branch factory.

Mo., St. Louis—Bottling.—St. Louis Brewing Assn. will build addition to bottling plant at 1401 N. 17th St.; cost \$5000; Gilsonite Construction Co., Contr., St. Louis.

Mo., St. Louis—Wearing Apparel.—Supreme Waist Co., capital \$10,000, inceptd.; Carl Zork, Jos. Evans and Edward Hirschfeld.

Mo., St. Louis—Waists.—Supreme Waist Co., capital \$10,000, inceptd. by Carl Zork, Jos. Evans and Edward Hirschfeld.

Mo., St. Louis—Waists.—Roberta Waist Mfg. Co., capital \$3500, inceptd. by Maxwell W. Strauss and others.

Mo., St. Louis—Wood estate will build factory structure 80x40 ft.; 4 stories; cost \$45,000.

N. C., Columbus—Medicine.—E. W. Dedmond Pellagra Medicine Co., capital \$50,000, inceptd. by W. A. and A. L. Dedmond of Columbus and E. W. Dedmond of Tryon, N. C.

N. C., Salisbury—Bakery.—A. G. Peeler contemplates remodeling building as bakery and erecting store and salesroom.

Okla., Caddo—Dyes.—Choctaw Fence Post & Tie Co. is experimenting relative to manufacture of dyes from osage orange wood; not ready to make definite announcement.

Okla., Lenapah—Medicine.—B. & E. Medicine Co. inceptd. by C. M. Wakefield, Edgar Briscoe and others.

Okla., Oklahoma City—Lubricants.—Consumers' Refining Co., Cushing, Okla., is arranging to install lubricating plant in connection with refinery owned by C. B. Shaffer.

Okla., Oklahoma City—Beverage.—Oklahoma Soda Water Co., capital \$100,000, incorporated by J. T. Murphy, Dorsey Moorefield and E. J. Giddings.

Okla., Oklahoma City—Oxygen.—Morris & Co., Chicago, Ill., are reported as contemplating establishment of plant to manufacture oxygen for commercial purposes; gas to be shipped in steel tubes.

Okla., Oklahoma City—Candy.—Kahn Kandy Company inceptd. by Gus Kahn, Ralph A. Rose and Geo. H. Giddings.

S. C., Charleston—Woodstock Mfg. Co., capital \$3000, inceptd. by J. F. Williams and A. D. Burbage.

S. C., Charleston — Limestone.—Georgia-Carolina Limestone Co. (C. B. Huiet, 189 E. Bay St.) will install limestone-crushing plant; equipment will include crushing machinery, dynamos, etc.; is prepared to engage engineers. (See Machinery Wanted—Crushing Machinery; Electrical Machinery; Rails, etc.)

S. C., Columbia—Talking Machines, etc.—Rustin's Talking Machine & Specialty Co., capital \$5000, inceptd. by W. B. Rustin and M. R. Rustin.

S. C., Marion — Bottling.—Marion Chero-Cola Bottling Co., capital \$12,000, inceptd. by Perry Moses, Jr., E. H. Moses and J. A. Parrish.

S. C., Spartanburg—Bottling.—Spartanburg Coca-Cola Bottling Co., capital \$50,000, inceptd. by Crawford Johnson, A. E. Tinsley and R. K. Carson; J. W. Allen is Pres.

Tenn., Fayetteville—Ice-cream.—V. O. Garrison sold Fayetteville factory and will install plant at Clarksville, Tenn.; probably not erect building or install refrigerating machinery first season. (Recent report regarding installation at Fayetteville is incorrect.)

Tenn., Clarksville—Ice-cream.—V. O. Garrison, Fayetteville, Tenn., will install ice-cream plant at Clarksville; probably not erect building or install refrigerating machinery first season. (See Tenn., Fayetteville.)

Tenn., Kingston—Lime.—Southern States Lime Co., capital \$50,000, inceptd. by C. G. Myers, J. N. Derrick, Hester Waller and others.

Tenn., Nashville—Gloves.—Holdfast Mfg. Co., Frank P. Grace, Propr., Harrisburg, Ill., is reported to establish plant to manufacture canvas gloves and mittens; understood to have ordered equipment.

Tex., Fort Worth—Toilet Preparations.—J. C. McCutchan Chemical Co., 25th and Market Sts., organized by J. D. McCutchan, D. C. Hickey and others; will build plant to manufacture extracts and toilet preparations.

Tex., Houston — Paint.—Bradford-Brown Paint Co. increased capital from \$20,000 to \$30,000.

Va., Basic City—Pipe Organs.—Carl Barkhoff Co., capital \$50,000, inceptd. with Carl Barkhoff, Pres.; continue established pipe-organ factory.

Va., Harrisonburg — Bottling.—Harrisonburg Christo-Cola Co., capital \$10,000, incorporated; J. M. Kavanaugh, Pres.; Chas. M. Miller, Secy.

Va., Richmond—Talking Signs.—Talking Sign Corp., capital \$10,000, chartered; Joel S. Perrin, Pres.; Geo. A. Mortland, Secy.

Va., Richmond—Phonographs.—Lyric Phonograph Co., capital \$5000, inceptd.; Kevce C. Steiner, Pres.; S. W. Selden, Secy.

Va., Roanoke—Ventilators.—Wilmont Ventilating Co. (lately noted inceptd. with \$50,000 capital) organized; office in Terry Bldg.; G. T. Geer, Pres.; J. K. Montague, V.P.; Mosby Montague, Secy.; has 100x30-ft. building; will manufacture ventilating fans for moving-picture theaters. (See Machinery Wanted—Electric Motors, etc.)

Va., Toms Brook—Lime.—Rockdale Lime Co., capital \$50,000, inceptd.; John C. Paxton, Pres.; Wm. Paxton, Secy.-Treas.; both of Woodstock, Va.

Va., Tenn., Bristol—Gloves.—Royal Pressing Parlor, J. W. Hays, Mgr., 23 6th St., will install department for manufacturing gloves. (See Machinery Wanted—Glove Machinery, etc.)

W. Va., Parkersburg—Glass.—Essex Glass Co. will build addition to plant.

W. Va., Martinsburg — Bottling.—H. & C. Cushman and Geo. Buxton will build bottling works; 40x40 ft.

W. Va., Sistersville—Chemicals.—Caldwell Chemical Co., C. W. Caldwell, Pres., writes to Manufacturers Record: "Secured ground and concessions from city; propose to locate chemical plant costing from \$100,000 to \$1,000,000; 20 acres on which by-product cokes, distilling and recovering plants and nitrating apparatus will be installed; buildings of sheet iron and concrete; daily capacity of coking plant 1000 tons coal; capacity of remainder sufficient to work up coal tar obtained from such distillation; not as yet secured architect and contractors, but ready to do so." Noted in Nov. (under Ky., Spottsville) as organized to manufacture picric acid, etc. (See Machinery Wanted—Coal Tar Products Plant.)

W. Va., Wheeling—Stogies.—M. Marsh & Sons Co. increased capital from \$100,000 to \$200,000.

### MOTORS AND GARAGES

Ala., Birmingham — Assembling Plant.—Ford Motor Co. (main office, Detroit, Mich.) is reported to build assembling plant.

Ark., Little Rock—Automobiles.—Schaad-Zimmermann Automobile Co., capital \$10,000, inceptd. by Ben D. Schaad, J. F. Zimmermann and Oscar A. Schaad.

Ga., Dalton—Garage.—Dixie Garage and Machine Co., capital \$1000, inceptd. by J. E. Whitson and Davis Hightower.

Ky., Covington—Automobiles.—Oldsmobile Sales Co., capital \$25,000, inceptd. by M. F. Kreeb and others.

Mo., Kansas City—Automobiles.—McDowell Motor Car Co., capital \$3000, inceptd. by W. P. McDowell, Frank J. Hall and R. L. Stan-cliff.

N. C., Mt. Airy—Automobiles.—Surry Motor Co., capital \$5000, inceptd. by J. D. Smith, J. D. Smith, Jr., and G. F. Marshall.

N. C., Wilmington—Garage.—H. L. Fennell, 111 Chestnut St., leased property at 16-38 N. 2d St.; will remodel as garage.

N. C., Wilmington—Garage.—W. D. MacMillan, Jr., let contract J. G. Ostermann to rebuild and enlarge 2-story brick building at 114 N. Second St., reported burned in Dec.; to be occupied as garage; plans by B. E. Stephens.

N. C., Winston-Salem — Garage.—Forsythe Motor Co. organized by J. H. Grubbs, J. A. Walker and C. W. Jones; will build garage and repair shop.

S. C., Greenwood—Automobiles.—Automobile Sales Co., capital \$10,000, inceptd.; R. A. Hawkins, Pres.; M. F. Sanders, V.P.; J. W. Jones, Secy.-Treas.

S. C., Rock Hill—Automobiles.—Rock Hill Buggy Co. will install plant to manufacture automobiles.

Tex., Austin—Automobiles.—Austin Motor Sales Co., capital \$10,000, inceptd. by E. H. Perry, F. E. Pryor and W. J. Carver.

Tex., Beaumont—Automobiles.—Prutzman-Comeaux Motor Car Co., capital \$7500, incorporated by Geo. Joe Prutzman, J. A. Comeaux and B. W. Parks.

Tex., Fort Worth—Automobiles.—Manning Auto Co., capital \$9000, inceptd. by E. C. Manning, L. L. Murray and D. O. Nay.

Tex., Waco—Automobiles.—Waco Mitchell Auto Co., capital \$5000, inceptd. by C. A. Weatherford, A. C. Prendergast, Jr., and J. M. Nash.

W. Va., Huntington—Automobiles.—Huntington Auto Sales Co., capital \$5000, inceptd. by C. C. Huddleston, J. P. Harpin, M. E. Webb and others.



W. Va., Morgantown—Garage.—West Morgantown Improvement Co. is having plans prepared by Carl Reger, 83 West Virginia Traction Bldg., Morgantown, for garage; 2 stories; 90x90 ft.

### RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Tex., San Antonio.—International and Great Northern Ry., O. H. Crittenden, Ch. Engr., at Mason Bldg., Houston, has completed plans for round-house and division shops, including boiler, machinery, blacksmith and copper shops; buildings of reinforced concrete and steel construction throughout; plans on file with Mr. Crittenden. (Lately noted.)

Tex., Temple.—Gulf, Colorado & Santa Fe Ry., F. Merritt, Ch. Engr., Galveston, Tex., is reported to modernize and rebuild pumping stations on entire system in Texas and Oklahoma.

### ROAD AND STREET WORK

Ala., Bay Minette.—Baldwin county voted \$30,000 bonds to improve roads and \$55,000 bonds to construct its portion of Mobile-Baldwin counties highway through Tensaw River Delta. (Noted in November.)

Ala., Camden.—Wilcox county will construct hard roads of clay and sand or clay and gravel from intersection point on Camden, Oak Hill and Pineapple Rd. and new proposed road to be constructed beginning at said intersection point and continuing toward Dallas county line via New Bridge; also construct similar roads as above stated, beginning at Snow Hill Depot and extending toward Lowndes county line via Simpson's Mill, through Cunningham's and McDowell Plantation; and beginning at Snow Hill Depot and continuing toward Ackerville; bids invited; profiles and specifications on file with J. N. Stanford, Probate Judge; Blair Hughes, Supvr. Roads. (See Machinery Wanted—Road Construction.)

Ark., Eldorado.—City plans to pave several streets, including square around Court-house; W. E. Ford, Engr., Little Rock. Address The Mayor.

Ala., Montgomery.—Montgomery county let contract Meade & Co., Ensley, Ala., at \$11-18.32 to construct 10 mi. top-soil road 17 ft. wide.

Fla., Clearwater.—City will grade and pave with vitrified brick on Turner St.; 4600 yds. of paving with 4500 ft. concrete curbs and gutters; Jos. N. Drew, Engr., Clearwater; bids until Feb. 9. (See Machinery Wanted—Paving.)

Fla., Tampa.—City let contract Davis & Webb to pave De Leon St. from Hyde Park to Magnolia Ave., and from Plant to Hyde Park Ave.

Ga., Americus.—City contemplates voting on \$30,000 bonds for street improvements. Address The Mayor.

Ky., Bardwell.—Carlisle County Comms. will extend State-aid highway begun in 1915; has 6 mi. under construction; surveying for remaining 6 mi.; E. B. Walker, Jr., Engr., Clinton, Ky.

Ky., Hopkinsville.—Christian county votes Feb. 18 on \$400,000 bonds to improve roads. Address County Comms. (Lately noted.)

Ky., Morganfield.—Union county contemplates voting Apr. 1 on \$450,000 bonds to construct roads and bridges. Address County Comms.

Ky., Morganfield.—Union County Comms. engaged Norman P. Orcutt, Surveyor, Louisville, to prepare plans, profiles and specifications for road from Boxville Woods to Webster county line, 9 mi., to be continuation of Uniontown and Boxville Rd. now in course of construction.

Ky., Whitesburg.—Letcher county contemplates voting in March on \$150,000 bonds to construct roads. Address County Comms.

La., New Orleans.—A. B. Blakmore, 702 Hennessey Bldg., has contract at \$7390 to construct earth road 2.5 mi. long and 25 ft. wide; contract includes excavating through swamp for fill.

Md., Baltimore.—City let contract H. H. Herzhberger, 1619 N. Monroe St., at \$1446.75, to lay cement footways and granite coping around area from Hamilton to Franklin St. and from St. Paul to Courtland St. (Call for bids lately noted.)

Md., Baltimore.—City will pave various streets included in Repaving Contracts Nos. 126, 127, 128 and 129; all on concrete base; Contract No. 126 (including sections of Stricker and Mosher Sts.) calls for 48,700 sq. yds. sheet asphalt, 600 sq. yds. granite block, 2000 sq. yds. vitrified block and 500 sq. yds. granite block repaving; Contract No. 127

(including sections of Bush, Wicomico and Conway Sts. and Columbia Ave.), 28,500 sq. yds. sheet asphalt, 2510 sq. yds. vitrified block, 3200 sq. yds. granite block and 2480 sq. yds. granite block repaving; Contract No. 128 (including sections of Baltimore, Calvert and Paca Sts.), 14,950 sq. yds. sheet asphalt, 6730 sq. yds. granite block repaving, 1650 sq. yds. vitrified block and 1800 sq. yds. granite block; Contract No. 129 (including sections of O'Donnell, Essex and Fleet Sts., Foster, Linwood and Montford Aves.), 47,050 sq. yds. sheet asphalt, 7550 sq. yds. granite block, 3400 sq. yds. vitrified block and 400 sq. yds. granite block repaving; bids until Feb. 2; R. Keith Compton, Chrmn. and Consult. Engr., Paving Commission. (See Machinery Wanted—Paving.)

Miss., Brookhaven.—Lincoln County Road Comms. contemplate road construction estimated to require \$150,000 bond issue.

Mo., Chillicothe.—City let contract John F. Meek, Jr., Chillicothe, to pave various streets; Jo Broadus, Engr., Chillicothe. (Call for bids lately noted.)

Mo., Kansas City.—City let contract Spitzcaufsky Bros., 26th St. and Grand Ave., at \$67,000, to construct 5000 sq. yds. macadam paving, including 14,000 cu. yds. grading, in park.

Mo., Marshall.—Saline county defeated \$1,310,000 bond issue to construct roads. (Noted in Dec.)

Mo., Ozark.—Christian county defeated \$40,000 bonds to construct rock roads in Billings Special Road Dist.; H. J. Neyer, Dist. Secy. (Lately noted.)

N. C., Charlotte.—Stephens Co., W. C. Rankin, Secy.-Treas., now developing Myers Park, will probably let contracts within 30 days for \$50,000 concrete street paving. (See Machinery Wanted—Paving.)

N. C., High Point.—City votes Feb. 7 on \$50,000 bonds to improve streets. Address The Mayor.

N. C., Lincolnton.—City let contract Noll Construction Co., Chattanooga, Tenn., to pave additional block with asphaltic concrete and about 3 additional mi. of cement sidewalks.

Okla., Pawnee.—City contemplates additional street paving. Address The Mayor.

S. C., Florence.—City let contract J. R. Steele of Bennettsville, S. C., to construct 2½ mi. of sidewalks, and Georgia Engineering Co. of Augusta, Ga., to pave streets with vitrified brick with cement grout filling on sand cushion; C. H. Carlisle, City Engr. (Lately noted.)

Tex., Bartlett.—City voted \$24,000 bonds for street paving. Address The Mayor.

Tex., Batesville.—Zavalla County Comms. let contract Bexar Construction Co., San Antonio, to construct Southern national highway through county from Nueces River to Frio county line.

Tex., Belton.—Bell county votes Feb. 19 on \$8000 bonds to construct roads in Salado Precinct. Address County Comms.

Tex., Brackettville.—Kinney County Comms. will expend \$80,000 to construct Spofford-Brackettville highway; bids until about Jan. 28; specifications on file with Bartlett & Ranney, Engrs., San Antonio, and with County Clerk at Brackettville; work divided into three contracts: Establishment and grading of grade and construction of macadam base; laying of asphalt or tarvia hard-rock topping; building of concrete flat crossing, culverts and bridges; Jos. Veitmann, County Judge.

Tex., Carrizo Springs.—Dimmit County Comms. will expend \$40,000 to improve roads; has let contract.

Tex., Galveston.—City voted \$875,000 bonds as follows: \$250,000 to pave, drain and improve streets; \$300,000 to repair, restore or submerge water mains across Galveston Bay; \$300,000 to restore, repair, fill, grade, pave, drain and improve streets, sidewalks, etc., damaged in August storm; \$125,000 to fund debt and pay cost of repaving and restoring streets and avenues, water-works, electric lights and other public property and remove debris from streets following August storm. A. T. Dickey, City Engr. (Lately noted.)

Tex., Hillsboro.—Hill county will issue \$150,000 bonds to improve roads in Road Dist. No. 2. Address County Comms.

Tex., Lockhart.—Caldwell County, Road Dist. No. 3 (including Luling) voted \$50,000 bonds for road construction. Address County Comms. (Lately noted.)

Tex., Houston.—City let contract W. L. Pearson & Co., Houston, for 22,000 yds. surface treatment on Washington Ave. from city limits to Eureka.

Fla., Miami.—City let contract Freedlund Construction Co., Miami, for paving, curbing, guttering and street oiling to cost \$21,000.

Tex., Sherman.—Grayson County Comms. let contract Womack Construction Co., Houston, Tex., to construct about 176¼ mi. graveled roads, and to J. A. McCoy of Abilene, Tex., to construct about 55¼ mi.; let gravel contract to J. W. Hoffman & Co. of Muskogee, Okla.; \$967,000 available; Julian C. Feld & Co., Consult. Engrs., Denison, Tex.; A. S. Noble, County Auditor. (Call for bids noted in December.)

Tex., Taylor.—City votes Feb. 15 on \$50,000 bonds for additional street paving; W. E. Dizler, City Engr.; Peter Schramm, Chrmn. Board Comms. (Lately noted.)

Tex., Tyler.—Smith county is reported to have voted \$100,000 additional bonds to complete road in Tyler Road Dist. Address County Comms.

Va., Chilhowie.—City is reported as contemplating construction of additional sidewalks; Jas. D. Tate, Mayor.

W. Va., Bath.—City will construct 15,000 sq. yds. paving and necessary curbing inlets and storm sewers; bids until Feb. 15; 6-in. reinforced concrete, plain concrete and brick with concrete base; bids until Feb. 15; J. A. Rinsinger, Mayor; C. L. Hunter, Recorder. (See Machinery Wanted—Paving.)

W. Va., Charleston.—City, B. A. Wise, City Mgr., let contracts for additional paving to include 75,000 sq. yds. asphaltic concrete and 15,000 sq. yds. brick; estimated cost \$180,000; awarded to R. M. Hudson, Central Engineering Co., Brown & Floyd Co. and Glover & Kimberlin of Charleston, Carey-Reed Co. of Lexington, Ky., and Federal Asphalt Paving Co., Hamilton, O.; J. M. Clark, City Engr. (Previously noted inviting bids.)

W. Va., Parkersburg.—City has \$300,000 available for street paving and sewer construction; T. L. Higgs, Acting City Engr. (Lately noted to pave various streets.)

W. Va., Pineville.—Wyoming County Comms. are having plans prepared for 15 mi. of main road, which will be ready for contract about latter part of Feb.; in this section will be many small culverts and two 30-ft. bridges; excavation will average about 6000 cu. yds. per mi.; will expend entire \$550,000 bond issue (noted in Dec.) for earth road grading and small structures, such as pipes and culverts up to 5 and 6-ft. spans; Blake Taylor of County Dept. of Public Roads, Pineville, is Ch. Engr.

W. Va., Wellsburg.—Brooke county will vote on \$300,000 bonds to construct roads. Address County Comms.

### SEWER CONSTRUCTION

Ky., Lexington.—City Comms. selected Solomon-Norcross Co., Atlanta, Ga., as engineer to prepare plans and specifications for sewage-disposal plant and to supervise construction. (Noted in September.)

La., Lafayette.—City contemplates voting on \$80,000 bonds for sewer system. Address The Mayor.

La., New Iberia.—City votes Feb. 2 on \$80,000 bonds to construct sewer system. Address The Mayor.

La., New Orleans.—City will construct subsurface drains in Tulane University property from Robertson to Freret St. and in Freret St. to Audubon Pl.; bids until Feb. 1; A. G. Ricks, Commr. (See Machinery Wanted—Sewer Construction.)

Md., Havre de Grace.—City has notifications from State Board of Health relative to extending present intake pipe of water system and providing another outlet for sewers; cost estimated at \$25,000. Address The Mayor.

Okla., Enid.—City votes Jan. 28 on \$25,000 bonds for sanitary sewer system; W. C. Roger, City Clerk.

Mo., St. Louis.—City will construct sewers in Glaise Creek Sewer Dist. No. 12; bids until Feb. 4; specifications, etc., obtainable from Prest. Board of Public Service, Room 325, New City Hall. (See Machinery Wanted—Sewer Construction.)

Tenn., Copperhill.—City votes Feb. 5 on \$20,000 bonds for sewer system and water-works. Address The Mayor.

Tex., Houston.—City will construct storm sewers on Noble and other streets; receive bids until Jan. 31; plans, etc., on file with E. E. Sands, City Engr. (See Machinery Wanted—Sewer Construction.)

Va., Chilhowie.—City is reported as contemplating construction of sewer system; Jas. D. Tate, Mayor.

Va., Narrows.—City votes Apr. 20 on \$18,000 bonds to construct sanitary sewer system

and water-works; plans include constructing 2 concrete tanks of 100,000 gals. capacity each; K. S. French, Mayor. (This supercedes recent item.)

W. Va., Parkersburg.—City has \$300,000 available for sewer construction and paving; T. L. Higgs, Acting City Engr.

### TELEPHONE SYSTEMS

Ky., Hazard.—Cumberland Telephone & Telegraph Co. (main office, Louisville, Ky.) will extend telephone system from Hazard through Elkhorn coal fields, Elkhorn City and Pikeville; from Elkhorn City system will extend via Carolina, Clinchfield & Ohio R. R. to Johnson City via Kingsport.

Ky., Louisville.—Louisville Home Telephone Co. will expend \$100,000 to \$125,000 for improvements, to include underground conduit construction, erection and equipment of telephone exchange; let general contract for exchange to Alfred Struck of Louisville, for heating installation to Clegg & Cox, and for plumbing to Haller & Zehnder; building will be 2 stories; brick and concrete; 60x160 ft.; fireproof; initial switchboard installations to provide for 2500 lines, with ultimate capacity for 12,000 lines; plans by Gray & Wischmeyer, Starks Bldg., Louisville. (Lately noted.)

Ky., Winchester.—Cumberland Telephone & Telegraph Co. (main office, Louisville) is reported to expend \$10,000 on improvements; replacing wires between Winchester and Lexington and constructing 2 mi. of cable in Winchester; also installing 2 copper circuits.

N. C., Manteo.—Dare County Telephone Co., capital \$10,000, incptd. by R. Bruce Etheridge and others.

Okla., Carmen.—Line O Telephone Co. incorporated by Chas. Ring, J. J. Franks and others.

Tex., Nopal.—Nopal Telephone Co. incptd. by E. W. Sunday, C. A. Hattenbach and M. C. Billings.

### TEXTILE MILLS

Ala., Alexander City.—Underwear Yarns.—Russell Mfg. Co. will build addition and install 2000 spindles.

Ala., Montgomery.—Cotton Goods.—Montala Mfg. Co. will install carding and spinning machinery and change weaving to automatic looms; ordered this machinery.

Ga., Columbus.—Cotton Cloth.—Muscooke Mfg. Co. let contract Frank A. Pierce, Columbus, to build 5-story steel-girder mill costing \$80,000; 150x250 ft.; foundations of concrete; upper structure of fireproof brick; fireproof doors; tar and gravel roof; C. L. Makepeace & Co., Archt.-Engr., Providence, R. I. (Lately noted to invest \$400,000 for this and other additional buildings, installation of 22,000 spindles and 300 looms, etc.)

Ga., Hampton.—Cotton Goods.—Henderson Mfg. Co., capital \$200,000, incptd. by A. J. Henderson and associates.

Ga., Jonesboro.—Hosiery.—Jonesboro Mfg. Co., capital \$30,000, incptd. by L. Z. Gilbert, J. O. Hightower, Sr., and D. P. Melson; will knit, dye and finish hosiery; electric power.

Ky., Maysville.—Cotton Twine, etc.—Maysville Cotton Mills will install additional machinery, costing \$25,000, to manufacture cotton twine, warp, clothes line, etc.; has let contract; completed 116x70-ft. 3-story mill construction building for this new equipment. (Previously reported having let contract for this additional building.)

La., New Orleans.—Sweater Coats.—O. K. Knitting Mills will add 3 sections of automatic power knitting machines, pressing machine and brushing machine; has purchased.

Md., Baltimore.—Oakum, etc.—N. B. Woolford Oakum Co. incptd.; acquire Baltimore Oakum Co., manufacturer of marine and plumbers' oakum, etc., and Baltimore Fiber Co., manufacturer of jute, hemp and cotton fibers; operate combined enterprise at 601 S. Luzerne Ave.; N. B. Woolford, Pres.; C. H. Hawkins, Secy.-Treas.

Mo., St. Louis.—Surgical Gauze, etc.—American Gauze and Cotton Co., capital \$7500, incptd. by A. C. Randall of E. St. Louis, Ill., Philip G. Lauff of Granite City, Ill., and others.

Mo., St. Louis.—Bleachery.—Lowell Bleachery, Lowell, Mass., increased capital from \$300,000 to \$600,000; will install bleaching and finishing machinery; has been operating temporary plant; reported to erect 2-story building and monthly capacity to be 250,000 lbs. cloth. (Previously mentioned as to build permanent plant.)

N. C., Brookford.—Cotton Twills, etc.—Brookford Mills Mfg. Co. (A. D. Julliard &

Co., New York) will build 100-ft. extension; install 100 additional looms on first floor and equip clothroom on second floor; John Deal, Contr., Brookford.

N. C., Draper—Cotton Goods.—Thread Mills Co., Spray, N. C., will build additional mill: 330x160½-ft. and 92x34-ft. structure; steel and wood construction; \$70,000; has let contract to J. A. Jones, Charlotte, N. C.; will install textile machinery, including electric drive; F. P. Sheldon & Sons, Archt.-Engrs., Providence, R. I. (Previously noted to build additions, etc.)

N. C., Forest City—Knit Goods.—Dixie Knitting Mill will change from steam to electric power; install electric motor.

N. C., Forest City—Cotton Goods.—Florence Cotton Mills will build addition to picker-room; install 35 H.P. electric motor and pickers with automatic feeders.

N. C., Leakesville—Knit Goods.—Thread Mills Co., Spray, N. C., is reported to build knitting mill.

N. C., Mt. Holly—Cotton Yarn.—C. E. Hutchinson (Pres. Woodlawn Mfg. Co., etc.) and associates will build cotton-yarn mill; have not determined details. (Lately reported to build.)

N. C., Shelby—Knit Goods.—H. F. Young and associates plan to form \$50,000 company for erection knitting mill.

N. C., Statesville—Cotton Yarn.—Millner Mfg. Co. will not now build mill; its machinery (contracted for) will be installed by Statesville Cotton Mills, J. W. Kaneer, one of Millner organizers, being superintendent of Statesville company; Millner may build a year later. (Lately noted inceptd. with \$125,000 capital, etc.)

S. C., Anderson—Cotton Duck.—Equinox Mills will add 20 looms to weave extra heavy army duck; has ordered this new machinery.

S. C., Honea Path—Converting Cloths.—Chiquola Mfg. Co. contemplates installing electric power, about 1600 H. P., in late spring or early summer; proposes to purchase secondary power from Southern Power Co. of Charlotte, N. C.; retain present steam plant and so arrange that may drive mill either by electricity or by steam power; also to arrange so that power distribution will be electrical, whether driven by steam engine or purchased electric power.

S. C., Clover—Cotton Yarn.—Hawthorn Spinning Mills will construct 500x127-ft. building; equip with yarn-spinning machinery. (Lately noted inceptd. \$500,000 capital, by M. L. Smith and others.)

Tenn., Chattanooga—Cotton Yarns.—Thatcher Spinning Mill, Herbert S. Thatcher, Secy., Ridgeville, Tenn., engaged J. E. Sirrine of Greenville, S. C., as engineer-architect; ordered machinery to include 15,000 spindles for manufacturing mercerized cotton yarn from sea-island cotton; mill building probably 310 ft. long; reinforced concrete construction. (Lately noted inceptd. with \$250,000 capital to build 15,000-spindle mill, etc.)

Tenn., Ridgeville—Mercerized Yarns, etc.—Standard Processing Co., A. H. Thatcher, Gen. Mgr., will build 3-story 87x61-ft. brick addition; let contract to Chandler & Campbell, Chattanooga; install additional machinery to increase capacity 35 per cent.; manufactures mercerized and bleached cotton yarns.

### WATER-WORKS

Ala., Alabama Port.—Tidewater Securities Corp., Mobile, proposes to extend water system. (See Miscellaneous Construction.)

Fla., Brooksville.—City is considering construction of water-works. Address The Mayor.

Ga., Dalton.—Water, Light and Sinking Fund Commrs., Paul B. Trammell, Chmn., contemplates improvements and extensions to water-works to include clear-water basin.

La., Lafayette.—City contemplates voting on \$50,000 bonds for water mains and fire protection. Address The Mayor.

La., New Orleans.—City will build addition to building, pumping station No. 3, Contract 76-1; Sewerage and Water Board, F. S. Shields, Secy., Room 508, City Hall Annex, receives bids until March 22; plans furnished on deposit of \$100.

Miss., Philadelphia.—City votes Feb. 1 on \$30,000 bonds to construct water-works. Address The Mayor.

Mo., Warsaw.—City contemplates constructing water-works. Address The Mayor.

N. C., Charlotte.—Water Commrs. will expend \$3700 to construct water mains in Belmont; estimated to supply 85 residences.

Okla., Enid.—City votes Jan. 28 on \$25,000 bonds for water-works; W. C. Roger, City Clerk.

Tenn., Copperhill.—City votes Feb. 5 on \$30,000 bonds for water-works and sewer system. Address The Mayor.

Tex., Alice.—City votes Feb. 26 on \$6000 bonds to extend water-works. Address City Com.

Tex., El Paso.—City let contract V. E. Ware, El Paso, at \$24,664.90 to build reservoir with capacity of 4,000,000 gals.

Tex., Fort Worth.—City defeated \$500,000 bond issue to complete Lake Worth conduit. (Lately noted to vote Jan. 21.)

Tex., Galveston.—City voted \$200,000 bonds to lay submerged 30-in. water main across Galveston Bay, contract for which has been let to Isaac Heffron of Galveston at \$60,000. (Award of contract and further facts lately noted.) (See Road and Street Work.)

Tex., Houston.—City will install 2 centrifugal pumps and motors at N. Main St. water-works; bids until Jan. 31; E. E. Sands, City Engr. (See Machinery Wanted—Pumps, etc.)

Tex., Marble Falls.—M. M. Barry, lessee of water and light plant, will install new machinery and make improvements.

Tex., Marble Falls.—M. M. Barry, lessee local electric-light and water plant, is reported to install machinery and make other improvements.

Tex., Refugio.—Commercial Club plans to drill well for water supply.

Va., Chilhowie.—City is reported as contemplating construction of water-works; Jas. D. Tate, Mayor.

Va., Graham.—Bluefield Valley Water-Works Co., capital \$100,000, inceptd.; W. B. Campbell, Pres.; W. J. Montgomery, Secy., both of Philadelphia, Pa.

Va., Hopewell.—E. I. du Pont de Nemours & Co. (main offices, Wilmington, Del.) will, it is reported, construct additional filtration plant with daily capacity 25,000,000 gals. water.

Va., Narrows.—City votes Apr. 20 on \$18,000 bonds to construct water and sanitary sewer system; plans to construct 2 concrete tanks of 100,000 gals. capacity each; K. S. French, Mayor. (This supersedes recent item.)

Va., Norfolk.—Board of Control let contract F. J. McGuire of Norfolk at \$64,509.40 to rebuild 3 dams and spillways at Little Creek and Lake Taylor; T. B. Dornin, Engr. Water Dept., in charge. (Call for bids lately noted.)

W. Va., Cowen.—Walter Mills and J. S. Mills applied for franchise to lay water mains and install electric-light plant.

### WOODWORKING PLANTS

Ark., Hamburg.—Spokes, etc.—Hammer-shark Box Co. will rebuild burned spoke plant and planing mill.

Fla., Pensacola.—Vehicles.—Wm. W. Alfred, Box 271, will establish carriage and wagon plant for repairs, etc.; occupy two-story 85x41-ft. mill-construction building (brick walls and cement floors in first story, with tar-gravel roof) to be erected by E. L. Herring; Wm. W. Alfred, Archt., Pensacola.

Ky., Barbourville.—Handles, etc.—T. W. Minton & Son (manufacturers of wagon and automobile parts and golf sticks) will enlarge plant and install equipment to manufacture handles and supplies for mining trade; reported to expend \$10,000.

Ky., Louisville.—Trunks.—Laub Trunk Co., capital \$5000, inceptd. by Victor and Abe Laub, Myron Goodman and Jacob Laub.

Ky., Louisville.—Planos, etc.—Adler Mfg. Co., capital \$500,000, inceptd. by C. L. Adler, D. F. Schroll, B. A. Meyer and John Marshall to manufacture planos, furniture, etc.; consolidates Adler Mfg. Co. with Beckwith Organ Co., Adler Organ Co. and Adler Lumber Co.

La., Monroe.—Woodworking.—West Monroe Mfg. Co. will rebuild woodworking plant lately noted burned; estimated cost \$50,000.

Mo., Chillicothe.—Gun Stocks.—W. J. Norris and associates will build gun-stock factory.

Mo., Wittenberg.—Lawn Swings, etc.—Miesner Lumber and Mfg. Co., N. D. Miesner, Mgr., will rebuild burned plant to manufacture lawn swings and other furniture; construct 100x100-ft. fireproof building costing \$5000 to \$6000; open building bids Feb. 1; will install machinery costing \$7000. (See Machinery Wanted—Woodworking Machinery.)

N. C., High Point.—Tables.—Ideal Table Co., capital \$50,000, inceptd. with Dr. J. W. McAnally, Pres.; A. S. Caldwell, V.P.; P. C. Royall, Mgr.; J. M. S. Sallsbury, Secy.—Trens.; manufacture library and dining-room tables; secured former Southern Nov-

city plant and will install additional machinery; equipment ordered.

N. C., Maysville.—Cooperage.—Maysville Cooperage Co. organized with John F. McNair, Pres., Laurinburg, N. C.; M. C. McIver, V.P. and Mgr., Maysville; R. L. McLeod, Secy., Maxton, N. C.; undertake its own construction; character and cost buildings not determined.

N. C., Newbern.—Cooperage.—S. H. Adams Cooperage Co. organized; S. H. Adams, Pres., Portland, Ind.; L. H. Reed, V.P. and Mgr.; Geo. Green, Secy.; each of Newbern; has building; purchased machinery; daily capacity, 3500 sets of heading and 40,000 staves.

Tex., Texas City.—Handles.—Texas City Handle Co. has buildings and machinery; plant to cost \$25,000; daily capacity, 200 doz. white ash shovel handles; organized with E. J. Goer, Pres. and Gen. Mgr.; H. A. Tjomas, Secy. (Lately noted organized with \$30,000 capital.)

Va., Lynchburg.—Woodenware.—Lynchburg Woodenware Corp., capital \$25,000, chartered; R. P. Thornhill, Pres.; E. O. Strange, Secy.

Va., Newport News.—Boxes, etc.—W. A. Bozarth, Williamsburg, Va., proposes investment of \$10,000 for plant to manufacture boxes, barrels and crates; has not decided as to buildings and equipment; expects to develop details by May 1. (Lately noted as negotiating for site, etc.)

Va., Petersburg.—Cabinets.—Petersburg Cabinet Co., capital \$10,000, inceptd.; J. H. Allen, Pres.; J. H. Odell, V.P.; Pelham Hurt, Secy.

### FIRE DAMAGE

Ala., Anniston.—Sam Morris' residence; loss \$5000.

Ala., Bay Minette.—Building owned by A. M. Thompson and occupied as armory.

Ala., Camden.—Carlton McConnell & Co.'s store building and vacant storehouse; loss \$10,000.

Ala., Dallas.—J. D. Bragg's store; Mr. Walker's dwelling; loss \$6000.

Ala., Lineville.—Barfield-Green Mercantile Co.'s store; W. B. Smith & Sons' store and other buildings; total loss \$60,000.

Ark., Bigelow.—School building, loss \$14,000. Address The Mayor.

Ark., Camden.—W. P. Ritchie's residence on Monroe St.

Ark., Marked Tree.—S. P. Thompson's buildings; loss \$25,000.

Ark., Morrilton.—Morrilton Primary School; loss \$30,000. Address The Mayor.

D. C., Washington.—Myers Millinery Shop at 1327 P St. N. W.; loss \$7000.

Fla., Jacksonville.—Residences of J. D. Guilfoyle, J. H. Whitney and L. F. Fauff; total loss \$15,000.

Fla., Plant City.—Plant City Foundry, Machine & Boiler Works; loss \$5000.

Fla., Pensacola.—W. D. Owens' dwelling.

Ga., Chipley.—Stores of C. Holt and Denman & Cornett; loss \$10,000.

Ga., Columbus.—"The Pines," owned by S. W. O'Neal; loss \$10,000.

Ga., Eatonton.—School building; loss \$10,000. Address School Trustees.

Ky., Dawson.—Jos. Woodruff's residence; loss \$12,000.

Ky., Fountain Run.—School building; loss \$4000. Address School Trustees.

Ky., Lexington.—John L. Calhoun's commission warehouse at 245-47 Vine St.; loss \$18,000.

Ky., Louisville.—St. Patrick's Roman Catholic Church school at 13th and Market Sts. Address The Pastor.

Ky., Scottsville.—W. L. and L. P. McElroy's dwelling; loss \$3000.

La., Colfax.—High School; loss \$12,000. Address The Mayor.

La., Jonesville.—E. A. Wilson's saw and shingle mill.

La., Lafayette.—R. Emmet O'Neill's residence.

La., New Orleans.—Angelo Danna's cigar factory and residence at 538 St. Philip St.; loss on building \$2000.

La., Oil City.—Cole Livery Stable and other buildings.

Md., Baltimore.—Wm. T. Barker Co.'s snuff factory at Lakeland, Baltimore county; loss \$10,000.

Md., Hagerstown.—D. M. Ridenour's residence at Mount Lena.

Md., Hagerstown.—H. A. Bester & Sons' greenhouses; loss several thousand dollars.

Md., Warren.—George Keys' residence, occupied by Geo. Barrett.

Miss., Indianola.—Freeman & Grant's building; loss \$5000.

Miss., Gulfport.—Harrison County Court-house; loss \$75,000. Address County Commrs.

Miss., Louise.—R. P. Greene's store and A.

G. Bray Mercantile Co.'s store owned by Mrs. C. E. Rhodes; total loss \$40,000.

Miss., Moss Point.—Moss Point Fertilizer Co.'s plant.

Mo., Kansas City.—East End Hotel at 736 E. 15th St., Mrs. Laura L. Miller, proprietress; loss \$10,000.

Mo., West Plains.—Fitzgerald Cafe; McBride garage.

N. C., Goldsboro.—Frank Daniels' residence.

N. C., Greensboro.—Residence of R. G. Vaughn, Pres. of American National Bank; loss \$25,000.

Okla., Colbert.—School building; loss \$7,000. Address The Mayor.

S. C., Anderson.—I. Rubenstein & Son's store.

S. C., Latta.—E. B. Berry's gin and mill.

Tenn., Titus.—W. T. Hicks' hand sawmill; loss \$10,000.

Tenn., Bryant Station.—Store of Hardison & Parrish; loss \$5000.

Tenn., Chattanooga.—Morrison Drug Co.'s store; loss several thousand dollars.

Tenn., Clifton.—Clifton Ice Co.'s ice plant and planing mill; loss \$20,000.

Tenn., DeRay.—Dwelling near Delta occupied by Taylor Bolling and owned by Lawrence Buford, Nashville, Tenn.

Tenn., Lone Mountain.—Payne Bros.' store, loss \$12,000; Lone Mountain Milling Co.'s plant, loss \$20,000.

Tenn., Paris.—Bud Edwards' residence at Forest Heights.

Tex., Avery.—W. F. Burden's two buildings.

Tex., Beaumont.—Beaumont Ice Co.'s warehouse; loss several thousand dollars.

Tex., Big Sandy.—Postoffice building, Address The Postmaster.

Tex., Caldwell.—Joe Truax's residence; loss \$3000.

Tex., Coleman.—Dr. G. B. Beaumont's dwelling; loss \$5000.

Tex., Collinsville.—Opera house and building occupied by Collinsville Times, both owned by Tom Rogers, Denison, Tex.; loss on buildings \$7500, on plant (owned by I. T. Payne) \$2500; First Guarantee State Bank Bldg., loss \$7500.

Tex., Dallas.—J. W. Dixon's residence at 1404 Akard St., loss \$6000; D. B. Anderson's dwelling at 1408 S. Akard St., owned by Lu E. Sullivan, loss \$6000.

Tex., Dallas.—J. H. Jones' residence, owned by R. K. Jones; loss \$4000.

Tex., Dawson.—Farmers' Union Cotton Gin; loss \$18,000.

Tex., Desdemonia.—Woodman Bldg.; Arer & Matthews' building; postoffice; May & Rushing's store; J. J. Henry's store; F. M. Daniels' store; total loss \$10,000.

Tex., Quanah.—Nix Hotel; loss \$5000.

Tex., McKinney.—Jas. Mevins' residence; loss \$5000.

Tex., Munday.—Wichita Valley Ry.'s depot; R. C. Gowdy, Ch. Engr., Wichita Falls, Tex.

Tex., Paris.—John T. Dickinson's residence; loss \$10,000.

Tex., Rogers.—P. G. Meachum's two buildings, occupied by Jones Mercantile Co. and Holme Drug Store, loss on buildings \$8000; 2 buildings, owned by Foster Co., Fort Worth, occupied by Rogers Cafe and barber shop.

Tex., Warren.—Tyler County Lumber Co.'s mill.

Va., Hanover.—George C. Pense's residence about 4 mi. from Hanover; loss \$4000.

Va., Harrisonburg.—W. H. Chine's store at Meyers Cave; loss \$10,000.

Va., Luray.—Otho Seal's residence 4 mi. west of Luray; Nathan T. Sedwick's residence at Bixler's Ferry.

Va., Norfolk.—J. R. Morrison & Co.'s store at Rosemont; loss \$4000.

Va., Petersburg.—Preston Roper's building, occupied by Cooper & Leavitt; loss \$10,000.

Va., Weyers Cave.—W. H. Chine's store; loss \$10,000.

W. Va., Newell.—E. E. Birch & Son's machine shop and garage; loss \$2500.

W. Va., Salem.—Elnira Meeks' residence; Ervin Stutler's residence; loss \$5000.

### DAMAGED BY FLOOD

Okla., Price.—Price Sand Co.'s machinery washed away by flood; estimated loss \$8000.

### WRECKED BY EXPLOSION

Va., Hopewell.—E. I. du Pont de Nemours & Co.'s acid tank at powder works; estimated loss \$100,000.



# BUILDING NEWS

## BUILDINGS PROPOSED

### APARTMENT-HOUSES

Ala., Birmingham.—H. Grady Webb will erect apartment-house at 1431 Louise Ave.; 12 rooms; brick veneer; composition shingle roof; vapor heat \$425; cost \$4000; plans and construction by owner.

La., New Orleans.—Adam Wirth opens bids Feb. 7 to erect apartment and store building on St. Charles St. between South and Girod Sts.; 5 stories; fireproof; reinforced concrete, steel and tile construction; 8, 8. Labouisse, Archt., New Orleans; let contract to Ole K. Olsen, New Orleans, to furnish material for concrete floors, metal courses, studding and lathing for partitions and suspended ceilings. (Lately noted.)

Md., Easton.—Avon Realty Co. will convert old hospital building into apartments.

Mo., St. Louis.—Miss Esther Beeler abandoned plan to erect apartment-house lately noted.

Mo., St. Louis.—Washington University will alter tenement and store building. (See Stores.)

Mo., St. Louis.—Victor E. Rhodes will erect building in North Parkview; 6 apartments; sun parlors and sleeping quarters; cost about \$50,000.

Mo., St. Louis.—Jas. E. Resinger will erect 2-story tenement house at 574-50 Berlin St.; cost \$12,000.

Okla., Ardmore.—J. H. Poulter & Son will erect apartment-house; 16 suites; fireproof; gas and electric lights; cost \$30,000.

Okla., Tulsa.—H. P. Brockman will erect \$12,000 apartment building at 909 S. Main St.

Tenn., Nashville.—Bruce Douglas has plans by Thos. W. Gardner, Stahlman Bldg., Nashville, for apartment-house at 114 Louise Ave.; 3 stories; three 6-room apartments and three 5-room apartments; mott brick with stone trim; interior walls of steel studding and metal lath; sun porches; steam heat.

Tex., El Paso.—Ellis Carlson will erect apartment house in Bassett Addition; cost \$15,000.

Tex., Fort Worth.—E. W. Van Slyke will erect 12-room 2-story apartment-house at 1015 Summit Ave.; cost \$3000; construction by owner.

Va., Richmond.—C. W. Davis will erect apartment-house on Hanover Ave.; 3 stories; brick; cost \$20,000; also plans to erect \$30,000 apartment-house in West End.

Va., Suffolk.—M. T. Elliott has plans for store and apartment building. (See Stores.)

### ASSOCIATION AND FRATERNAL

Ala., Selma.—Masonic Order will remodel building on Alabama St. for Masonic Temple; front to be veneered and pressed brick, entrance changed, etc.; cost \$7000.

Ark., Morrilton.—Ancient Order of United Workmen will remodel building for lodge; Thos. Harding, Archt., Little Rock.

Ark., Ozark.—Masonic Order plans to erect building on S. 3d St.; 2 stories; 25x100 ft.; stone or brick; cost \$9000.

Ga., Atlanta.—S. A. Allright opens bids to erect lodge and store building. (See Stores.)

La., Monroe.—Western Star Lodge No. 34, A. F. & A. M., is reported to erect \$50,000 temple.

Md., Baltimore.—Highlandtown Branch, Y. W. C. A., has plans by O. B. Wight, 1122 Munsey Bldg., Baltimore, for building at Clinton St. near Eastern Ave.; main building 3 stories; 62x40 ft.; gymnasium annex, 2 stories; 48x72 ft.; Kahn pressed steel fireproof construction; slag roof; wood on concrete floor; steam or hot-water heat; gas and electric light; cost about \$40,000; contractors estimating are B. F. Bennett Building Co., 123 S. Howard St.; John Cowan, Inc., 106 W. Madison St.; Fred Decker & Sons, 1209 E. Biddle St.; J. H. Miller, Inc., Miller Bldg., Franklin and Eutaw Sts.; Morrow Bros., Fidelity Bldg.; C. E. Stubbs, 509 Equitable Bldg.; C. L. Stockhausen Co., Inc., National Marine Bank Bldg.; John Waters, 23 E. Center St.; C. W. Littleton & Son, 4313 Liberty Heights Ave.; Cogswell-Koether Co., 206 Park Ave.; bids opened Jan. 31. (Noted in Nov.)

Tex., Pittsburg.—Woodmen of the World will erect building; 50x100 ft.; two or three stories; Sam H. Greer, A. F. Crumpler and J. M. Bradley are Comm. to arrange details.

Md., Catonsville.—Palestine Lodge of Masons will erect addition to Masonic Temple at Frederick and Newburg Aves.; cost \$15,000.

Okla., Commerce.—Loyal Order of Moose has plans by Bert C. Overton, Okmulgee, Okla., for lodge building; composition roof; cement and oak floors; metal ceiling; skylight; gas and electric fixtures; hot-water heat.

Okla., Tulsa.—Tulsa Trades and Labor Council is considering erecting building.

Tex., Bay City.—I. O. O. F. has plans by J. E. Large, Bay City, for 2-story brick business and lodge building; cost \$15,000. (Lately noted.)

Tex., Fort Worth.—Dr. M. C. Creagan, T. J. Murphy and others are promoting erection of \$10,000 building for Knights of Columbus.

Tex., Terrell.—I. O. O. F. will erect store and lodge building on N. Catherine St.; 2 stories; lower floor, stores; upper floor, lodgerooms. (Lately noted.)

Va., Phoebus.—Phoebus Lodge No. 1514, Loyal Order of Moose, acquired building at Howard and Curry Sts. and will convert into lodgerooms; completion in 45 days; W. G. Benthal and others, Com.

Va., Pulaski.—Gary Laughon and C. H. Hoback will erect store, office and lodge building. (See Stores.)

W. Va., Wilkes.—Railroad Y. M. C. A. will erect building.

### BANK AND OFFICE

Ark., Searcy.—W. G. Caldwell has plans by Frank W. Gibbs & Co., Little Rock, for office building on Court Square; 3 stories; cost \$12,000.

Ga., Cordele.—Exchange Bank does not contemplate erecting building as lately reported.

Ga., Savannah.—A. L. Tucker will erect office and store building. (See Stores.)

Ky., Harlan.—J. H. Newberry will erect office and business building; 3 stories; brick; 60x50 ft.

Ky., Louisville.—Louisville & Nashville R. R. W. H. Courtenay, Ch. Engr., Louisville, is reported to enlarge 10-story office building at 9th St. and Broadway.

Md., Baltimore.—H. J. Burkett, 307 St. Paul St., is having plans prepared by F. E. Beall, 206 St. Paul St., to alter 3-story dwelling at 514 St. Paul St. for offices.

Mo., St. Joseph.—Bartlett Trust Co. is reported having plans prepared by Starrett & Van Vleck, 8 W. 40th St., New York, for bank and office building; 6 stories; Hoggson Bros., Constr. Designers, 485 Fifth Ave., New York.

N. C., Newton.—Ridgeway Hosiery Co. plans to erect office building and number of dwellings. (See Dwellings.)

Tex., Ennis.—Ennis National Bank will erect 2-story bank building.

Tex., Galveston.—South Texas State Bank, 2309 Market St., will expend \$22,000 to improve building; raise floor, install fire and burglar proof vault with inside dimensions 16x20 ft., bronze grill work, marble wainscoting and steps, erect 1-story brick addition 30x30 ft., etc.; A. J. Bellis, Archt., Galveston.

Va., Pulaski.—Gary Laughon and C. H. Hoback will erect store, office and lodge building. (See Stores.)

Va., Suffolk.—American Bank of Suffolk has tentative plans by John Kevan Peebles, Norfolk, for building; 7 stories; first two floors for bank; remaining floors for offices; stone and rough pressed brick with stone and terra cotta trimmings; tile corridors; marble base and wainscot; hardwood doors; cost \$75,000.

### CHURCHES

Ala., Birmingham.—Rahama Baptist Church has preliminary plans by J. E. Greene, American Trust Bldg., Birmingham, for Sunday-school building; 70x30 ft.; seating capacity 1200; cost \$15,000; will later erect church building to cost \$20,000. Address The Pastor.

Ala., Jasper.—L. B. Musgrove, John H. Bankhead, Jr., W. C. Clark, C. B. Dilworth and Arthur F. Fite are Finance and Building Comm. for Methodist church building.

Ark., Norfolk.—Methodist church will erect parsonage. Address The Pastor.

Fla., Perry.—Rev. Father Bresnahan, Tallahassee, Fla., is promoting erection of church; 26x50 ft.; brick or artificial stone veneer; galvanized shingle roof; electric lighting; cost \$2500.

Fla., Tampa.—United Brethren Church, Rev. R. A. Smith, pastor, 3302 Nebraska Ave., will erect building at 25th and Nebraska Ave.; 54x50 ft.; ordinary construction; slate roof; hot-air heat; electric lighting; cost about \$15,000; bids received until May 1; construction about Aug. 1; L. M. Saviers, Chrmn., Building Committee, Curtis and Nebraska Sts. Address The Pastor.

Ga., Moultrie.—Methodist congregation will erect Sunday-school building, 2 stories; 40x50 ft.; main auditorium to seat 500; lets contract Feb. 15. Address The Pastor.

Ky., Louisville.—West Louisville Evangelical Congregation, Edwin M. Ritter, Pres., will erect building at 11st and Herman Sts.; cost \$10,000.

Ky., Louisville.—First Church of Christ, Scientist, purchased site at 3d St. and Ormsby Ave.; is reported to erect building. Address The Pastor.

Ky., Paducah.—First Christian Church, Rev. Roy Rutherford, pastor, will enlarge lecture-room wing, install electrically-equipped pipe organ, redecorate, repaint, etc.

Md., Baltimore.—Calvary Methodist Episcopal Church South has plans by Theodore Wells Pietsch, American Bldg., Baltimore, for Sunday-school building at University Parkway and Charles St.; brick; marble trimmings; basement, first floor and gallery; steam heat; electric lights; plumbing; slag roof; bids open Feb. 1; cost \$35,000; will ultimately erect parsonage and church; total cost \$150,000. Contractors estimating on Sunday-school building are B. F. Bennett Building Co., 123 S. Howard St.; Irwin & Leighton, 809 Keyser Bldg.; D. M. Andrews Contracting Co., 600 Equitable Bldg.; Edw. Waters & Co., 509 N. Charles St.; C. C. Watts, 407 E. 25th St.; Burns & Russell, 1103-4 American Bldg.; Consolidated Engineering Co., 243 Calvert Bldg.; C. E. Stubbs, 548 Equitable Bldg.; John Hiltz & Sons, 3 Clay St.; Singer-Pentz Co., 600 Equitable Bldg.; Fred Decker & Son, 1309 E. Biddle St.; Cogswell-Koether Co., 206 Park Ave.; West Construction Co., Knickerbocker Bldg.; Geo. M. Blake, 332 Law Bldg.; Henry Rippel, 7 Clay St. (Lately noted.)

Miss., Crystal Springs.—Baptist church has plans by J. E. Greene, American Trust Bldg., Birmingham, for building; brick with stone trim; Spanish metal tile roof; dome; 8 columns; steam heat; vacuum-cleaning system; auditorium and Sunday-school room to seat 700; 10 classrooms; cost \$15,000.

Miss., Tupelo.—First Baptist Church has plans by J. E. Greene, American Trust Bldg., Birmingham, for building; brick; stone trim; dome; Spanish metal tile roof; heating not determined; seating capacity 1000; cost \$20,000.

Mo., Kansas City.—Holy Cross Catholic Church, St. John and Quincy Ave., will erect addition for sacristies; cost \$15,000 to \$20,000. Address The Pastor.

N. C., Durham.—North Durham Methodist Church will erect building on Trinity Ave. Address The Pastor.

N. C., Reidsville.—First Presbyterian Church plans to erect building. Address The Pastor.

Okla., Hollis.—First Baptist Church has plans by Hawk & Parr, Security Bldg., Oklahoma City, for building; 68x72 ft.; cost \$11,000; contract to be let at once.

Okla., Lawton.—Christian Science church will erect \$20,000 building; W. E. Hudson and B. M. Parmenter are interested.

S. C., Greenville.—Judson Baptist Church will erect building; cost \$3000. Address The Pastor.

Tex., Lampasas.—Presbyterian church has plans by J. E. Greene, American Trust Bldg., Birmingham, for building; metal roof; cost \$3500. Address The Pastor.

Tex., Waco.—Scandinavian Lutheran church will erect building; John E. Johnson, Ener Nelson and others, Committee.

Va., City Point.—J. M. Cook is chairman of committee promoting erection of Methodist church, Rev. J. G. Gresham, Pastor.

Va., Hopewell.—Jewish congregation, M. Newsradter and Melvin Fliegenheimer, trustees, will erect synagogue.

Va., Roanoke.—St. Mark's Lutheran Church will erect rectory; cost \$7000; C. H. Hinnant, Archt., Roanoke.

Va., Roanoke.—West End Presbyterian Church is having plans prepared by C. H. Hinnant, Roanoke, for building; cost \$20,000.

W. Va., Huntington.—Central Christian Church, C. M. Wallace, Chrmn., Building Committee, has plans by Robt. L. Day, 1019 First National Bank Bldg., Huntington, for addition to building; 35x35 ft.; brick; 2 stories; steam heat; cost \$3000. (Lately noted.)

### CITY AND COUNTY

Ga., Metter.—all.—Candler County Commrs., Standford Bland, Clerk, will probably open bids Feb. 14 to erect 2-story jail.

Ga., Rome.—City Hall.—City votes Feb. 29 on \$40,000 bonds to complete and equip municipal building; W. M. Gammon and Hugh McCrary, Commrs. (Lately noted.)

Ky., Jackson.—Jail.—County Commrs. plan to erect jail; Alvin Derrickson, Clay Watkins and South Strong, Comm.

Md., Baltimore.—Market, etc.—City will install sanitary glass stalls in Richmond Market, equipped with refrigerating coils and connected with sanitary sewerage system; cost \$20,000; also build comfort station at Howard St. and 5th Ave., Richmond Market; also has \$20,000 appropriation for other market improvements; Wm. T. Childs, Dep. City Comptroller, may furnish information.

Tenn., Knoxville.—Market.—City will expend about \$3500 to repair market damaged by fire. Address The Mayor.

Tex., Port Arthur.—Library.—City contemplates erecting \$30,000 library; has donation of \$55,000 for building and maintenance. Address The Mayor.

Va., Norfolk.—Stable.—Board of Control, T. S. Purdie, Chrmn., will soon let contract to erect stable for Norfolk Light Artillery Blues, Capt. Paul W. Keen, commanding; has appropriation of \$10,000. (Lately noted.)

Va., Richmond.—Armory.—City Administration Board opened bids to alter and repair Howitzers Armory; 2 units, 220x100 and 100x100 ft.; drill and riding halls; one unit fireproof, other near fireproof; tin roof; electric lights; ordinary prism glass vault lights; steam heat, \$11,000; J. T. Nuckols, Richmond, is lowest bidder at \$114,000; Carmel & Johnston, Archts., Richmond. (Lately noted.)

### COURTHOUSES

Fla., St. Augustine.—Pinellas County Commissioners will expend \$5000 to remodel and equip Elks' building for courthouse and offices for county officials.

Miss., Gulfport.—Harrison County Commrs. are having plans prepared to rebuild courthouse recently burned.

Mo., Bowling Green.—County votes Feb. 4 on \$75,000 bonds for courthouse. Address County Commrs.

S. C., Greenville.—Courthouse Commrs. will probably let contract to J. A. Jones, Charlotte, N. C., to erect courthouse; 50x130 ft.; front section 3 stories and basement; back portion 7 stories; steel, reinforced concrete and tile construction; fireproof; stone, brick and terra-cotta exterior; cost \$110,000; P. Thornton Marye, Archt., Candler Bldg., Atlanta, Ga., and H. Olin Jones, Supervising Archt., Skelton Bldg., Greenville. (Previously noted.)

Tex., Wichita Falls.—Wichita county voted \$225,000 bonds to erect courthouse. Address County Commrs. (Lately noted.)

### DWELLINGS

Ark., Crawfordsville.—W. E. Sellman has plans by Regan & Weller, 834-35 Bank of Commerce & Trust Bldg., Memphis, Tenn., for residence; 2 stories; concrete foundation; frame and stucco; pressed, rough and tapestry brick; hardwood and tile floors; asphalt shingle roof; hot-air heat; cost \$8000. Address owner.

Ark., Wilmet.—H. F. Hollenbeck will erect dwelling on Front St.; brick; first floor finished in hardwood; heating plant and laundry in basement; cost \$5000.

D. C., Washington.—C. H. Gallher, 3532 New Hampshire Ave. N. W., has plans by W. R. Talbott, 1314 F St. N. W., Washington, for 7 dwellings at 120-127 Rock Creek Church Rd.; 20x33 ft.; ordinary brick construction; tin roofs; gas and electric lights; cost \$2200 each; hot-water heat, \$200 each; construction by owner, who may be addressed. (Lately noted.)

Fla., Green Cove Springs.—Southern Cattle Feeding Co., main office, Columbus, O., will erect 10 dwellings for superintendents and 40 dwellings for employes in connection with stock-raising development.

Fla., Jacksonville.—E. A. Burney purchased 5 acres of land near Panama Park and will erect residence and establish dairy.

Fla., Jacksonville.—V. R. Kooper will erect 2-story frame residence on Liberty St.; cost \$3000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Fla., Jacksonville.—Wm. Meier, 2343 Riverside Ave., will erect dwelling on Herstell St.; 30x40 ft.; first story hollow tile; second, frame; Certainted shingle roof; city lighting; cost \$4000; plans and construction by owner. (Lately noted.)

Fla., Jacksonville.—R. P. Parramore will erect 2-story frame dwelling on Silver St. to cost \$3400; remodel 2-story dwelling on May St., cost \$2400; alter 6 two-story frame houses on May St. to cost \$1000; repair 2 frame houses on Stonewall St. to cost \$500.

Fla., Jacksonville.—J. F. Ellenberg will erect 3 one-story frame houses on Myra St. and frame house at Green Ave. and West St.; total cost \$4000.

Fla., Miami.—Ralph Worthington is reported to erect residence on Biscayne Bay.

Fla., Orlando.—John J. Bridges, Montclair, N. J., is reported to erect dwelling.

Fla., St. Augustine.—Theo. V. Pomar will erect residence on Bay St.

Fla., St. Petersburg.—Chas. R. Hall will erect 25 dwellings on Boulevard; R. T. Wedding, landscape Archt.

Fla., Tampa.—Patrick & Frank are erecting several bungalows on Nebraska Heights.

Fla., Tarpon Springs.—J. R. Durrance will erect 1-story frame dwelling.

Ga., Atlanta.—Dr. John H. Powell will erect residence on Peachtree Rd.

Ga., Atlanta.—Harry G. Poole is reported to erect 6 frame residences at Inman Yards; cost \$10,000; Haralson Bleckley, Archt., Third National Bank Bldg., Atlanta.

Ga., Augusta.—Kincaid Cotton Mill will erect 27 dwellings for employees.

Ga., Augusta.—Mrs. Florence Spivey has plans by G. Lloyd Precher, Augusta, for dwelling; 6 rooms.

Ky., Louisville.—Theresa Moellman will erect 2 frame dwellings on S. Third St. to cost \$2000 each; 3 frame dwellings on M St. to cost \$3000 each, and frame dwelling on W. Market St. to cost \$2500.

La., New Orleans.—Frank B. Moore will erect \$10,000 dwelling at Banks and Pierce Sts.

La., New Orleans.—Emanuel L. Weil, Jr., will erect residence at St. Charles Ave. and Constantinople St.

Md., Baltimore.—H. D. Eldman & Bro., 2301 Pennsylvania Ave., will erect 8 dwellings in 2300 block Pennsylvania Ave.

Md., Baltimore.—Maryland Realty Co. has plans by Stanislaus Russell, 2900 Clifton Ave., for 12 two-story brick dwellings on Dalrymple Ave. near Garrison Ave.; 14.5x50 ft.; total cost \$30,000.

Md., Baltimore.—E. C. Briant has plans by Stanislaus Russell, 3900 Clifton Ave., Baltimore, for 3 dwellings on Park Hill Pl.; 2 stories; brick; two 16x54 ft.; one 22x38.6 ft.; cost \$7000.

Md., Baltimore.—Geo. W. Habbersett has plans by A. Lowther Forest, Law Bldg., Baltimore, for dwelling at Walbrook; 30x54 ft.; green slate roof; cost \$7000; will also erect garage; plans out for bids Jan. 24.

Md., Baltimore.—Frank Novak Realty Co., 744 N. Kenwood Ave., will erect 33 dwellings in 1000 block 25th St.; 2 stories; brick; one 28.3x56 ft.; remainder 15x50 ft.; steam heat; electric lights; ordinary construction; tin roof; cost \$40,000; Callis & Callis, Archts., 2655 Kennedy Ave., Baltimore; construction by owner.

Md., Baltimore.—Globe Realty Co. is having plans prepared by Stanislaus Russell, 2900 Clifton Ave. for 15 two-story brick dwellings on Laurens St. between Bloomingdale and Longwood Sts.

Md., Baltimore.—Lohmuller Building Co., 463 Calvert Bldg., will erect 61 dwellings at Curtis Bay; 18½x44 ft.; 2 stories; brick; porch front; white marble trimming; electric lighting; furnace; cost \$1200 each; G. Bernard Lohmuller, Archt., Calvert Bldg.

Md., Baltimore.—Jacob S. Detrick, 205 E. Preston St., is having plans prepared by Howard Sill, 11 E. Preston St., for dwelling in Guilford.

Md., Baltimore.—Homeseekers' Realty Co., 11 E. Fayette St., will erect 15 dwellings on Irving Ave. near Old Frederick Rd.; cost \$25,500.

Md., Hamilton.—Hamilton Park Co., J. W. Lohmuller, Prest., Calvert Bldg., Baltimore, will erect number of cottages on Old Harford Rd.; 2 stories and 1½ stories; porches; cost about \$3000 each; G. Bernard Lohmuller, Archt., Calvert Bldg.

Md., Luthicum Heights.—W. Hampton Luthicum is having plans prepared by Robt. L. Harris, 3027 Kennedy Ave., Baltimore, Md., for residence to replace structure previously noted damaged by fire; 2½ stories;

28x44 ft.; plans ready for bids in about 2 weeks.

Miss., Indianola.—Chas. F. Klingman will erect residence; 2 stories; frame; concrete foundation; brick chimneys; Hood's pottery tile; hardwood and tile floors; asphalt shingle roof; cost \$5500; Regan & Weller, Archts., 834-5 Bank of Commerce & Trust Bldg., Memphis, Tenn. Address owner.

Mo., Joplin.—O. H. Gentry is having plans prepared by Bert C. Overton, Okmulgee, Okla., for residence; brick veneer and Carthage stone; tile roof; wood floors; hot-water heat; cost \$20,000.

Mo., Joplin.—O. R. B. Pace has plans by Bert C. Overton, Okmulgee, Okla., for a residence; 2 stories; 3 rooms; 30x42 ft.; brick veneer and Carthage stone; tile roof; tile floors; hot-water heat; cost \$7000 each.

Mo., Kansas City.—Wm. R. Jewell, Jr., 3429 Michigan Ave., has plans by Victor Dufoc, 76th and Bellefontaine Sts., Kansas City, for dwelling at 1410 W. 50th St.; 46x35 ft.; ordinary construction; shingle roof; \$400 hot-water heat; cost \$5000; construction by owner.

Mo., St. Louis.—Wm. J. Kelm will erect dwelling on Michigan Ave., near Cherokee St.

N. C., Newton.—Ridgeway Hosiery Co. plans to erect number of dwellings and office building.

Okla., Tulsa.—Fred Sager will erect 2-story frame dwelling on S. Denver St.; cost \$5500. Okla., Tulsa.—W. S. Hall will erect 2-story frame dwelling on Boston Ave. to cost \$3500; will also erect \$300 garage.

S. C., Anderson.—Rufus Fant has plans by Casey & Fant, Anderson, to remodel dwelling on River St.; 10 rooms; hot-air heat; electric lights; cost \$5000 to \$6000. (Lately noted.)

S. C., Newberry.—G. F. Wearn has plans by Lella Ross Wilburn, Peters Bldg., Atlanta, for dwelling; 2 stories; frame; shingle roof; hardwood floors; electric lighting; cost \$4000.

Tenn., Lebanon.—Geth M. Walker has plans by Lella Ross Wilburn, Peters Bldg., Atlanta, for dwelling; 1 story; frame; shingle roof; 9 rooms; hardwood floors; hot-air or steam heat; stone foundation; electric lighting; cost \$3750.

Tenn., Sewanee.—Dr. Walter Hüllihen has plans by Eugene H. Knight, 1134 Brown-Marx Bldg., Birmingham, for bungalow; 8½x59 ft.; wood-joint construction; exterior walls local stone; 2 bathrooms with tile floors; other floors quarter-sawn oak; terra-cotta tile roof; hot-water heat; electric lights; bids opened about Feb. 1. Address the architect. (Lately noted.)

Tex., Dallas.—Mrs. Lila Stewart will erect 2-story 7-room frame residence at 4023 Cedar Springs St.; cost \$3000.

Tex., El Paso.—Jolly & Morris will erect bungalow in Block 132 E. El Paso, to cost \$2500, and bungalow in Block 93, El Paso, to cost \$3000.

Tex., El Paso.—Elias Torres will erect bungalow in Manhattan Heights; cost \$4000.

Tex., Houston.—T. H. Ball will erect \$12,000 dwelling in Montrose.

Va., Hopewell.—Lombkey & Williams purchased 19 lots in Day addition and are reported to erect dwellings.

Va., Richmond.—J. F. Parker will erect dwelling; 2 stories; brick and stucco; cost \$3600.

Va., Richmond.—P. C. Andrews will erect 2-story frame stucco residence on Edgemont Ave.; cost \$3500.

Va., Richmond.—A. C. Anderson will erect brick dwelling on Edgewood Ave.; cost \$3500.

Va., Roanoke.—A. C. Andrews will erect 2-story frame stucco dwelling on Fendall Ave.; cost \$3500.

Va., Roanoke.—Mrs. Rosa Schmidt will erect 2-story frame dwelling on Montrose Ave.; cost \$3000.

Va., Roanoke.—Mrs. Octavia Umlauf will erect 2-story frame dwelling on Fendall Ave.; cost \$5500.

W. Va., Bluefield.—C. C. Lilly will erect residence lately noted; 36x56 ft.; ordinary construction; brick and stone; vulcanite roof; electric lighting; cost \$7500; hot-water heat, \$1000; J. I. Carter, Archt., 19 Thornton Bldg., Bluefield. (See Machinery Wanted—Boilers and Radiation; Electric and Gas Fixtures; Roofing; Brick; Mantels and Tiles; Ornamental Glass.)

#### GOVERNMENT AND STATE

Md., Indian Head.—Government Building.—Bureau of Yards and Docks, Wm. M. Smith, Acting Chief, Washington, D. C., receives bids until Feb. 19 to erect extension to

building No. 166 at Naval Proving Grounds; plans and specifications obtainable from Bureau.

Tex., Fort Sam Houston.—Surgical Pavillion.—Government will erect surgical pavillion at Fort Sam Houston, including plumbing, heating and wiring; bids opened Jan. 21 by Constructing Quartermaster.

W. Va., Huntington.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., rejected all bids for addition to postoffice; will have plans revised and call for new bids; J. W. Dingess, postmaster. (Previously noted.)

W. Va., Roncverre.—Postoffice.—Geo. A. Miller begins construction about Apr. 1 on postoffice and business-room at Main and Maple Sts.; 2 or 3 stories; brick; composition roof; cost about \$7000; hot-water heat, \$1800; architect not employed.

#### HOSPITALS, SANITARIUMS, ETC.

Ky., Hazard.—Dr. F. E. Bodkin of Berea, Ky., and others will erect hospital; cost \$10,000.

Ky., Paducah.—G. Tandy Smith, Jr., receives bids until Jan. 31 to erect tuberculosis sanatorium on Mayfield Rd.; brick front; cost \$4000 to \$5000; A. L. Lassiter & Bro. and G. Tandy Smith, Jr., Archts.; C. W. Emory, Chrmn. Building Committee.

Ky., Olympia.—Arthur P. Brown, Americus, Ga., and Chas. H. Shuler, Port Republic, Va., acquired Olympian Springs and will improve; install heating plant for 20 rooms, construct swimming pool for salt-water bathing, remodel old hotel for sanitarium, etc.

Tex., El Paso.—Jolly & Morris have permit to erect hospital in East El Paso; cost \$50,000.

Tex., Tyler.—Bothwell & Shaw, Tyler, completed plans and will let contract at once to erect city and county hospital; 60x45 ft.

#### HOTELS

Ala., Dauphin Island.—Tidewater Securities Corp., J. M. Dewberry, Prest., Mobile, Ala., will erect 40-room hotel; cost \$30,000 to \$40,000 in connection with other improvements.

Fla., Fort Pierce.—C. L. Faber of Atlantic Hotel purchased school building on Pine St. and will remodel for 50-room hotel.

N. C., Southport.—Col. Robt. Stride is promoting company to erect Clarendon Hotel; first floor brick with terra-cotta trimmings; second and third floors, frame with ornamental shingles; roof garden; stores on first floor; H. E. Bonitz, Archt., Wilmington, N. C.

N. C., Waynesville.—Wm. J. East, Asheville, N. C., and Pittsburgh, prepared plans for proposed hotel; frontage 150 ft.; 4 stories; brown tapestry brick central building; white pressed brick wings; cost \$100,000; (Waynesville Hotel & Development Co. previously noted inceptd with \$100,000 capital stock.)

Tex., Galveston.—Mrs. A. M. Mechem, San Antonio, will erect 3-story addition to Seaside Hotel at Tremont St. and Ave. Q; remodel front of present structure; addition to contain 32 rooms; cost \$12,000 to \$15,000.

Va., Hopewell.—H. H. Lavenstein, Petersburg, Va., and others plan to erect hotel; 70 to 80 rooms; details not definite.

W. Va., Logan.—B. F. Dewees will erect 3-story lodging-house; construction about Apr. 1.

#### MISCELLANEOUS

Ala., Birmingham.—Stable.—W. H. Irwin is having plans prepared by John D. Gullett, Chamber of Commerce Bldg., Birmingham, for livery stable on 1st Ave. between 23d and 24th Sts.; 2 stories; 100x140 ft.; ordinary construction; tar and gravel roof; 1 vehicle elevator; cost about \$15,000; plans ready about Apr. 1. (Lately noted.)

Ark., Heber Springs.—Undertaking Establishment.—T. E. Olmstead will rebuild undertaking establishment lately burned; 24x60 ft. (See Machinery Wanted—Roofing and Ceiling.)

Ark., Helena.—Livery Barn.—N. Straub Sons Mercantile Co. has plans by E. T. Walker, Helena, for livery barn on Walnut St.; 52x120 ft.; ordinary construction; composition roof; electric lighting; construction to begin within 30 days. (Lately noted.)

Fla., Tampa.—Clubhouse.—Circolo Cubano Club, Dr. Alfred J. Kohly, Prest., will erect clubhouse.

Ky., Louisville.—Auditorium.—Otis W. Pickrell, Chrmn.; Thos. Floyd Smith, Robt. F. Vaughan and Fred Sackett are Com. to organize company to erect \$300,000 auditorium.

La., New Orleans.—Clubhouse.—New Orleans Women's Club plans to erect clubhouse; Mrs. W. A. Portes is interested.

Miss., Jackson.—Home.—Mississippi Home-Finding Society has plans by N. W. Overstreet, Jackson, to erect orphan home; 40x40 ft.; fireproof; tile roof; cost \$13,000; heating \$1000; bids opened about Feb. 10. Address Owner. (Lately noted.)

Mo., Kansas.—Clubhouse.—Automobile Club has plans by Shepherd, Farrar & Wiser, Kansas City, to remodel clubhouse near Hickman Mills; will add second story over portion of present structure, change exterior, construct roof garden, pergolas, etc.

Mo., Kansas City.—Stable.—American Express Co. will erect building at W. Pennway and Summit Sts.; 2 stories and basement; 125x135 ft.; concrete; accommodations for 85 vehicles and 145 horses; cost \$50,000.

Tex., Galveston.—Bathhouse.—Murdoch Bathhouse Co., J. E. Pearce, Prest., plans to erect bathhouse south of seawall near Tremont St.; cost \$30,000.

Va., Chase City.—Clubhouse.—Mecklenburg Medicinal Water Corp. opens bids Apr. 1 (extended date) to erect hunting and pleasure clubhouse on Main St.; 72x150 ft.; frame; cost \$15,000 to \$20,000; Pritchett & Henderson, Archts., Danville, Va. Address Jas. O. Cobb, Prest., Mecklenburg Medicinal Water Corp. (Previously noted.)

Va., Hopewell.—Fire Station.—E. I. du Pont de Nemours & Co. will erect fire station in "B" village.

#### RAILWAY STATIONS, SHEDS, ETC.

Fla., Palm Beach.—Florida East Coast Ry. S. C. Coe, Engr. Maintenance, St. Augustine, Fla., will erect passenger station; stucco.

Ga., Tignall.—Elberton & Eastern R. R. Co., Alexander Wilson, Ch. Engr., Elberton, Ga., will erect 6 stations on extension from Tignall to Lincolnton and Tignall to Washington.

Ky., Louisville.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, is reported to enlarge building. (See Bait and Offices.)

La., Leesville.—Kansas City Southern R. R., C. E. Johnston, Ch. Engr., Kansas City, Mo., plans to erect station; brick construction.

N. C., Charlotte.—Seaboard Air Line Ry. W. D. Faucette, Ch. Engr., Norfolk, will erect 2-story brick station, with umbrella sheds 300 ft. long; pave yards, etc. (Previously noted.)

S. C., Florence.—Seaboard Air Line Ry., W. D. Faucette, Ch. Engr., Norfolk, Va., is reported to erect passenger station on North Irby St.; ornamental brick; stone trimmings; slate or tile roof.

Va., Richmond.—Virginia Ry. & Power Co. will erect 1-story brick store and waiting room on 18th St. near Marshall St.; cost \$3000.

#### SCHOOLS

Ala., Mobile.—Mobile county voted \$150,000 bonds for schools in county; A. G. Ward, Chrmn. Board of Revenue and Road Commissioners. (Lately noted.)

Ark., Bigelow.—City will rebuild school building noted damaged by fire at loss of \$14,000.

Tex., Corsicana.—School Board is having plans prepared by H. O. Blanding, Corsicana, and Field & Clark, associates, Fort Worth, for school at 1st Ave. and 12th St.; 80x50 ft.; ordinary construction; composition roof; low-pressure steam heat; cost about \$13,000. (Lately noted.)

Fla., Lake Helen.—Board of Public Instruction of Volusia County, C. R. M. Shepard, Secy., De Land, Fla., receives bids until Mch. 4 to erect brick school; plans and specifications at office of Mark & Sheffall, Archts., 210 Clark Bldg., Jacksonville.

Fla., Okeechobee.—Special Tax Dist. No. 1 opens bids Feb. 21 to erect school; 180x60 ft.; ordinary construction; ground story first and second floors; brick and Deans tile wall; will contain gymnasium with basketball court 40x60 ft.; overhead indoor track and gallery; chemical laboratory; physics laboratory; manual-training equipment; auditorium 60x60 ft., to seat 750; fire escapes; alternate bids on concrete floors; Johns-Manville or Barrett specification roof; probably Detroit combination heating plant; electric lights; cost \$55,000; construction begins Mch. 15. Address F. B. Trimble, Fellsmere, Archt. (Lately noted.)

Fla., St. Petersburg.—Dist. No. 3 voted \$20,000 bonds to erect school. Address School Trustees. (Lately noted.)

Ga., Baconton.—Town Council receives bids until Jan. 31 to erect school buildings; plans



at office of H. E. Nash, Archt., Albany, Ga., and E. B. Mullins, Clerk of Council, Bacon, Va.

Ga., Tifton.—City appropriated \$30,000 to erect high school. Address The Mayor. (Previously noted.)

Ky., Versailles.—Margaret College, Rev. Jas. M. Maxon, Pres., contemplates erection of \$15,000 additional building.

Md., Chevy Chase.—See Md., Rockville.

Md., Kensington.—See Md., Rockville.

Md., Rockville.—Montgomery County Commissioners will ask Legislature for authority to issue \$50,000 bonds to erect school at Chevy Chase and additions to schools at Rockville and Kensington, Md.

Miss., Martinsville.—Coplant County School Board will issue \$5000 bonds to erect and equip school building. Address Chrmn. of Schools Board, Hazelhurst, Miss.

Mo., Clayton.—Clayton School Dist. is reported to have voted \$125,000 bonds to erect high school. Address Dist. School Trustees.

Mo., Fulton.—Board of Education, Fulton Dist., opened bids to erect high school; Ernest Braun, Jefferson City, Mo., reported as lowest bidder; M. F. Bell, Archt., Fulton. (Noted in Dec.)

N. C., Columbus.—High School Dist., E. W. S. Cobb, Clerk Board Education, Columbus, sells \$8000 bonds Feb. 21 for high school building.

N. C., Edenton.—School Board, M. L. Wright, Supt., is having plans prepared by C. Gadsden Sayre, Anderson, S. C., for building; brick and stone; probably hot-air heat; electric lighting; 11 classrooms; hardwood floors; composition roof; cost \$25,000. (Lately noted.)

Okla., Alva.—Alva School Dist. plans to issue \$30,000 bonds to erect high school; election Jan. 25; G. M. Lisk, Clerk Board of Education. (Lately noted.)

Okla., Tulsa.—Clint Moore will erect residence at 17th St. and Denver Ave.; 2 stories; cost \$10,000.

Okla., Tulsa.—Fred Fink will erect residence; 2 stories; brick; cost \$5000.

Okla., Tulsa.—F. D. Ziegler will erect residence; 2 stories; frame; cost \$5000.

Okla., Tulsa.—W. S. Hall will erect \$3500 2-story frame residence.

S. C., Columbia.—A. C. Moore, Chrmn., 1323 Washington St., Columbia, receives bids until Jan. 28 to erect Blossom St. school; approximately 75x80 ft.; ordinary construction; clay Spanish tile roof; mechanical warm-air heating plant; electric lights; J. H. Sams, Archt., Columbia; E. S. Dreher, Supt. City Schools. Address Mr. Moore. (Lately noted.)

S. C., Mayo.—Mayo School Dist. voted \$5000 bonds to erect brick school building; H. T. Cash, F. H. Hardin and M. S. Stone, Trustees. (Lately noted.)

Tenn., Fountain City.—See Tenn., Knoxville.

Tenn., Knoxville.—Knox County Commrs. will erect schools at West View, South Knoxville, Fair Garden, Fountain City, Powell Station and Lincoln Park; 2 stories; brick.

Tenn., Lewisburg.—Lewisburg School Dist. voted \$50,000 bonds to erect high school. Address Dist. School Trustees.

Tenn., Nashville.—City will erect east wing to Hume-Fogg High School at Broadway and 7th Ave.; steel and concrete; composition roof; date of opening bids not set; cost \$39,000; William B. Ittner, Board of Education Bldg., St. Louis, and Hibbs & Southgate, Nashville, Archts. (Previously noted.)

Tenn., Powell Station.—See Tenn., Knoxville.

Tex., Austin.—School Board, W. H. Cullen, Pres., will erect 2 ward schools at W. Lynn and 10th Sts. and Driving Park Addition; 62x84 ft.; 2 stories; brick; 8 rooms; brick walls; fireproof stairs and corridors; asphalt and gravel roof; cost \$12,000 each; bids opened Jan. 26; Dennis R. Walsh, Archt., Littlefield Bldg., Austin. Address Mr. Cullen. (Lately noted.)

Tex., Bastrop.—High Grove and Alum Creek School Dist. each voted \$2500 bonds for schools; Hickory Grove School Dist. votes Jan. 31 on bonds to erect school. Address School Board.

Tex., Fort Stockton.—School Dist. No. 1 voted \$50,000 bonds for school. Address School Trustees.

Tex., Laredo.—School Trustees will request City Council to call election on \$50,000 bonds to erect high school and two ward schools.

Tex., Marshall.—City voted \$50,000 bonds for schools. Address The Mayor. (Lately noted.)

Tex., McKinney.—School Board plans to erect building.

Tex., Oakville.—Trustees are having plans prepared by Stephenson & Heldenfels, Beeville, Tex., for school building; frame; cost \$5000.

Va., Bassett.—C. H. Hinnant, Roanoke, Va., prepared plans for alterations and additions to residence to cost \$5000.

Va., Portsmouth.—Norfolk County Board of Supervisors are considering issuing \$15,000 bonds to erect school at Pinners Point.

## STORES

Ala., Birmingham.—W. C. Bonham will erect 1-story brick building at 32d St. and 10th Ave.; cost \$4000.

Ark., Pine Bluff.—Mann-Tankersley Drug Co. will erect 2-story brick building on Main St.; cost \$12,000.

Fla., Pensacola.—E. L. Herring is having plans prepared by W. W. Alfred, Pensacola, for brick building; 2 stories; 41x55 ft.; tar and gravel roof; glass front; electric fixtures.

Ga., Albany.—Farkas estate will erect 3 stores, each 27x70 ft.; 1 story; brick; cost \$3000.

Ga., Atlanta.—George Forrester is reported to erect building on Peachtree St. near Porter Pl.

Ga., Atlanta.—S. A. Albright opens bids about Feb. 15 to erect stores and lodge building at Gordon and Inman Sts.; 90x95 ft.; ordinary construction; tar and gravel roof; Walker & Chase, Archts., Candler Bldg., Atlanta. (Lately noted.)

Ga., Gainesville.—Felix Jackson will erect brick building; 80x200 ft.

Ga., Savannah.—A. L. Tucker will erect store and office building at 20 State St.; brick; 2 stories; cost \$3500.

Ga., Moulton.—Moulton Drug Co. is reported to erect building.

Ky., Harlan.—C. C. Rhodus will erect business building; cost \$10,000; contract let Feb. 19.

Ky., Harlan.—J. H. Newberry will erect business and office building. (See Bank and Office.)

Ky., Hazard.—Jellico Grocery Co., Jellico, Tenn., will erect store building; C. G. Jones, local manager.

Ky., Louisville.—R. J. Hagan will erect brick store at 724 S. Fourth St.; cost \$3500.

Ky., Louisville.—A. B. McAfee and others inceptd. company to erect theater and store building. (See Theaters.)

La., New Orleans.—Adam Wirth opens bids Feb. 7 to erect store and apartment building on St. Charles St. (See Apartment-Houses.)

Mo., St. Louis.—Washington University will expend \$5000 to alter store and tenement building at 1731-37 Franklin St.; construction by owner.

N. C., Raleigh.—Stonewall J. Adams will improve store; install tapestry brick and plate-glass front, remodel interior, etc.; cost \$4000.

N. C., Raleigh.—Marsh, Dunn & Thompson will erect 2 stores on W. Martin St.; cost \$10,000.

N. C., Salisbury.—Archibald Hedrick will expend \$5000 to improve store on Main St.

N. C., Southport.—Col. Robt. Stride is promoting company to erect hotel with stores on first floor. (See Hotels.)

N. C., Warsaw.—H. F. Pierce plans to erect 3 brick store buildings on Front St.

Okla., Blackwell.—Tharp-Wallace Furniture Co. will erect business building; red brick; marble trimmings; plate glass front.

Okla., Clinton.—Brecht Bros., Hobart, Okla., will erect business building.

Okla., Henryetta.—J. R. Reynolds will erect 2-story brick business building; brick; steel I beams; metal ceiling; cast-iron columns.

Okla., Hydro.—J. P. White will erect brick business building.

Okla., Miami.—Mrs. Arrene B. Wise, La Junta, Colo., will improve Wise building, occupied by Hadley Drug Co.; will erect rear addition, etc.

S. C., Sumter.—O'Donnell & Co. are having plans prepared by N. Gallard, Rock Hill, S. C., for store building. (Previously noted.)

Tex., Abilene.—J. M. Radford receives bids until Feb. 1 and lets contract Feb. 5 to erect four brick one-story buildings; will erect structure on Walnut St., brick; 70x140 ft.; David S. Castle, Archt., Abilene.

Tex., Bay City.—I. O. F. has plans for business and lodge building. (See Association and Fraternal.)

Tex., Dallas.—Dreyfuss & Son leased building at Murphy and Main Sts. and will remodel; cost \$15,000.

Tex., Galveston.—Louis Adoue will erect 2-story building at 1916 Market St.; cost \$4500.

Tex., Galveston.—Chas. I. Kory will erect business building; 2 stories; brick; 43x90 ft.; cost \$8000; A. J. Bellis, Archt., Galveston.

Tex., Gonzales.—A. O. Neumann will erect store and warehouse on N. St. Paul St.; 48x94 ft.; fireproof; concrete; cost \$5000. (Lately noted.)

Tex., Munday.—P. B. Broach will erect 4 brick buildings to replace burned structures.

Tex., Terrell.—I. O. F. will erect store and lodge building. (See Association and Fraternal.)

Va., Petersburg.—Wm. E. Armstrong purchased building on W. Bank St. and will remodel for store building.

Va., Suffolk.—M. T. Elliott has plans by Philip P. Moser, Norfolk, for store and apartment-house on Washington St.; 2 stories; brick.

W. Va., Charleston.—Farmers' Meat Market will erect building.

## THEATERS

Ky., Louisville.—A. B. McAfee, A. C. Brock, T. C. Brock, Prof. A. E. Mayzeck and W. L. Sanders inceptd. company to erect motion-picture theater on Walnut St. near 11th; fireproof; brick and steel; front of cream enameled brick with pilasters of brown enameled brick; cut-stone trimmings; marble and tile in lobby; 2 store-rooms; cost \$30,000; S. P. Ostrander, Archt., Louisville. (Lately noted.)

Ky., Louisville.—T. J. Morrow and others

are promoting erection of moving picture theater on Fourth St.; work to include remodeling present building; cost \$100,000; Capt. Brinton B. Davis, Inter-Southern Bldg., Louisville, probable Archt.

Md., Baltimore.—Linden Co. has plans by Sparklin & Childs, Law Bldg., to erect moving-picture theater at 546 W. North Ave.; 40x150 ft.; will install pipe organ.

Okla., Tulsa.—C. W. McCarty is reported having plans prepared for theater; two stories; 67x125 ft.; cost \$50,000.

## WAREHOUSES

Ala., Birmingham.—Collins & Co., through Wm. Leslie Welton, Archt., 1907 American Trust Bldg., Birmingham, opens bids Feb. 8 to erect warehouse at 1st Ave. and 24th St.; 5 stories; fireproof or mill construction. (Previously noted.)

Ala., Gadsden.—Southern Mfg. Co., H. L. Gwin, Gen. Mgr., will erect brick warehouse; 150x150 ft.; 13,000 sq. ft. floor space.

N. C., Hickory.—Brookford Mills Mfg. Co. is reported to erect brick warehouse.

Okla., Apache.—R. W. Frick will erect warehouse; 25x140 ft.

Tex., Beaumont.—Beaumont Enterprise Publishing Co. will erect warehouse.

Tex., Gonzales.—A. O. Neumann will erect warehouse and store. (See Stores.)

Va., Bristol.—Bristol Grocery Co. has plans by C. H. Hinnant, Roanoke, Va., for warehouse; 62x160 ft.; brick and mill construction; Barrett specification roof; concrete and wood floors; steam heat; electric lights; electric elevator; cost \$20,000; construction in charge of foreman. (Noted in December under Stores.)

## BUILDING CONTRACTS AWARDED

### APARTMENT-HOUSES

La., New Orleans.—Adam Wirth let contract to Ole K. Olsen for material for reinforced concrete floors, etc., for apartment and store building. (See Buildings Proposed—Apartments.)

Md., Baltimore.—Geo. W. Haynes has plans by W. H. Murray for two-story frame building at Duval Ave. and Edgewood St.; 39.6x30 ft.; two apartments; cost \$5000; Murray & Haynes, Contrs., 3017 Chelsea Ave., Baltimore.

Mo., St. Louis.—Marie S. Pendergrast let contract to Cudmore Construction Co., St. Louis, to erect 3-story tenement-house and 1-story garage at 5521 Waterman Ave.; cost \$20,800.

Mo., St. Louis.—F. and T. Saum let contract to B. J. Charleyville, St. Louis, to erect 3-story tenement-house; cost \$3000.

Mo., St. Louis.—Mrs. Brown let contract to R. Mederacke, St. Louis, to erect tenement-house on Portis Ave.; 40x55 ft.; ordinary construction; gravel roof; furnace heat; electric light; cost \$7000. Address Contr. (Lately noted.)

Tex., El Paso.—M. A. White let contract to A. M. Horne, El Paso, to erect apartment-house on Prospect Ave.; 2 stories; brick; 17 suites; O. H. Thorman, Archt., El Paso.

Tex., Waxahachie.—J. H. Benson let contract to erect 10-room brick-veneer apartment-house.

Va., Newport News.—Chrysson Bros., Smithburg, Md., let contract to erect store and apartment building. (See Stores.)

Va., Petersburg.—Miss Grace Binford let contract to Fulton Brick Works, Petersburg, to erect 2 flats at Walnut Hill; 34x45 ft.; ordinary construction; slate roof; electric and gas lighting; cost \$6500; hot-water heat \$500; S. Daly Craig, Archt., Petersburg. Address contractor. (Lately noted.)

### ASSOCIATION AND FRATERNAL

Tex., Galveston.—Galveston Council 787, Knights of Columbus, let contract to Coyle Bros., Galveston, to remodel Crystal Majestic Theater Bldg. for store and lodgerooms; cost \$5000. (Lately noted.)

Tex., Lufkin.—Lufkin Masonic Building Assn., G. R. Thompson, Secy., let contract to erect 3-story brick store, office and lodge building; cost \$16,000; Ralph H. Cameron, Archt., Gibbs Bldg., San Antonio. (Noted in December.)

### BANK AND OFFICE

Ala., New Decatur.—Chas. Bassett let contract to Southern Seating & Cabinet Co., Jackson, Tenn., to remodel banking-room of Central National Bank; 25x100 ft.; ordinary construction; American radiation heating; Miller & Martin, Archts., Birmingham.

### CHURCHES

N. C., Edenton.—Baptist Church, Rev. E. L. Wells, pastor, is reported to have let contract to Mr. Matthews, Kinston, N. C., to erect building; cost \$20,000; colonial style; brick and stone trimmings; metal roof; tile floors on porches; indirect lighting; rolling partitions; C. Gadsden Sayre, Archt., Anderson, S. C.

Tex., Galveston.—Adoue Seamen's Bethel let contract to B. A. Coyle, Galveston, to erect dwelling; about 40x40 ft.; 2 stories; hollow-tile construction; 5 rooms; composition roof; cost \$6000; Stowe & Stowe, Archts., Galveston. (Lately noted.)

### CITY AND COUNTY

Okla., Checotah.—City Hall.—City let contract to J. J. Rooney to erect city hall; cost \$25,000.

S. C., Kingstree.—Library.—City let contract to Grandy & Son, Sumter, S. C., to erect Carnegie library; cost \$5150.

Tex., Orange.—Jail.—City let contract to S. Etie for labor to erect jail, city to purchase material; steel and concrete; 27-ft. front; Mr. Henry, City Engr.

### COURTHOUSES

Tex., El Paso.—El Paso County Commrs. let contract at \$12,500 to Rathbun & Mix, El Paso, for 500,000 brick to be used in construction of \$500,000 courthouse, for which J. E. Morgan, El Paso, has general contract; Trost & Trost, Archts., El Paso. (Lately fully detailed.)

### DWELLINGS

Ala., Birmingham.—Hinkle Bros., agents, let contract to C. M. Allen & Sons, Birmingham, to erect 5 one-story frame residences at 10th Ave. and 16th St. N.; total cost \$5500.

Ark., Wilmet.—L. W. Perdue let contract to I. J. Gaddy, Hermitage, Ark., to erect 8-room bungalow.

Fla., St. Petersburg.—Ludwig Bott let contract to W. A. Roberts, St. Petersburg, to erect residence on Ingleside Ave.; H. H. Dupont & Co., Archts., St. Petersburg.

Fla., St. Petersburg.—G. H. Church let contract to O. J. Darling, St. Petersburg, to erect dwelling; 51x28 ft.; frame; pine floors; electric lighting; cost \$2300. (Noted in Dec.)

Fla., St. Petersburg.—F. R. Kennedy, Grand View Park, let contract to Robt. L. Sharp, St. Petersburg, to erect dwelling; 28x32 ft., with 14-ft. extension at front, 10-ft. extension rear and 10-ft. veranda; frame; concrete foundation; fireproof shingles; electric lighting; cement sidewalks; fireplaces and stoves; cost \$3500; water supply \$500; M. E. Benjamin, Archt., St. Petersburg; construction of foundation by owner. (Lately noted.)

Ga., Manchester.—Manchester Cotton Mills let contract to W. B. Fuller, Manchester, to erect 12 frame dwellings.

Ga., Macon.—J. M. Heard, Jr., let contract to J. H. B. Wilder, Macon, to erect residence; 2 stories; 9 rooms; solid brick; metal-shingle roof; cost \$5500. (Lately noted.)

Md., Baltimore.—Geo. Schluderberg let contract to Consolidated Engineering Co., Calvert Bldg., Baltimore, to erect residence on Park Heights Ave.; 3 stories; brick, stucco and Spanish tile; C. M. Anderson, Archt., 324 N. Charles St., Baltimore. (Lately noted.)

Mo., St. Louis.—F. V. Houston let contract to R. J. Charleyville, St. Louis, to erect 2-story brick dwelling and 1-story garage at 5565 Lindell St.; cost \$16,000. (Previously detailed.)

Mo., St. Louis.—H. W. Fix let contract to J. P. Rupp Building & Contracting Co., St. Louis, to erect dwelling at 2040 Harris St.; 2 stories; cost \$5500.

N. C., Charlotte.—Wm. Anderson let contract to Blythe & Isenhour, Charlotte, to erect residence on Queen's Rd., Myers Park; cost \$10,000; 70x10 ft.; brick; slate roof; hot-water heat; electric lighting; Hunter & Gordon, Archts., Charlotte.

N. C., Lexington.—Rev. F. H. Funderburk is reported to have let contract to erect dwelling.

N. C., Winston-Salem.—C. L. Carroll let contract to A. H. Walls, Winston-Salem, to erect residence; 2 stories; 8 rooms; frame; cost \$5000.

Okla., Sapulpa.—Ernest B. Hughes let contract to Tom Mace, Sapulpa, to erect dwelling; 40x56 ft.; 2 stories; mill construction; shingle roof; electric lighting; cost \$4000; natural-gas heat, \$400; Chas. A. Popkin, Archt., Sapulpa.

S. C., Anderson.—Lee G. Holleman let contract to C. M. Guest, Anderson, to erect residence; veneered stone exterior; cost \$8000.

S. C., Spartanburg.—Dr. J. L. Jeffries let contract to P. S. Cecil, Spartanburg, to erect residence; colonial style; cost \$5000; construction begins March 1.

Tenn., Lebanon.—H. T. Burnett let contract to Robt. L. White, Lebanon, to erect residence on W. Main St.; 1½ stories; 32x56-9.6x8.6 ft.; ordinary or mill construction; wood roof; electric light from city plant; concrete sidewalks; cost \$6000; hot-air heating plant \$250; material purchased; subcontracts let; Geo. D. Waller, Archt., Nashville. (Lately noted.)

Tex., El Paso.—W. R. Mayleumber has plans by S. E. Patton, 509 Caples Bldg., El Paso, and let contract to Mayfield & Shaw, El Paso, to erect residence; 6 rooms; 28x45 ft.; red pressed brick; shingle roof; pine flooring; hot-air heat; electric lights; cost \$3500.

Tex., El Paso.—O. H. Thorman, El Paso, prepared plans for residence at Copper and Raynor Sts.; 2 stories; brick and stucco; Spanish tile roof; cost \$10,000; contract let for brick work.

Tex., Galveston.—Adoue Seamen's Bethel let contract to erect dwelling. (See Churches.)

Va., Hopewell.—John F. Bartleson let contract to erect residence on 5th Ave., Dupont City; will probably erect additional dwellings.

Va., Hopewell.—West End Realty Co., Petersburg, Va., let contract to J. A. George & Son, Hopewell, to erect 8 four-room residences in du Pont Annex; cost about \$3600.

Va., Norfolk.—Arthur W. Dupue let contract to R. W. Beard to erect residence and garage at Edgewater; Wickham C. Taylor, Archt., Norfolk.

Va., Petersburg.—Geo. S. Bernard let contract to Fulton Brick Works, Petersburg, to erect residence; 34x12 ft.; ordinary construction; slate roof; electric and gas lights; cost \$6800; S. Daly Craig, Archt., Petersburg. Address contractor. (Lately noted.)

## GOVERNMENT AND STATE

Fla., St. Petersburg.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract to M. L. Holladay, Greensboro, N. C., to erect postoffice; cost \$89,717. (Lately noted.)

## HOSPITALS, SANITARIUMS, ETC.

Ark., Texarkana.—Michael Meagher Charity Hospital estate let contract to Quinn & Echols, Texarkana, to erect annex to hospital; mill construction; tin roof; wood floors; steam heat; cost \$20,000; Stewart Moore, Archt., Texarkana, Tex. (Lately noted.)

## HOTELS

Ala., Mobile.—S. H. Peck let contract to Jett-Muths Contracting Co., Mobile, to alter and improve Battle House; will extend trellis room, install marble lunch counter, change portico, redecorate, etc.; cost \$40,000; Hutchisson & Denham, Archts., Mobile. (Lately noted.)

Ky., Louisville.—Following subcontracts have been let in connection with erection of 10-story annex to Tyler Hotel: Face brick, Hydraulic Press Brick Co.; heating, Neville-Kellner & Co.; wiring, Marine Electric Co.; plumbing, P. H. Meyer Co., all of Louisville; Bailey & Koerner, Gen. Contrs., Louisville; D. X. Murphy & Bro., Archts., Louisville. (Previously detailed.)

Tex., Waco.—J. S. Cherry let contract to enlarge hotel.

Va., Petersburg.—Virginia Real Estate Corporation let contract to erect store and rooming-house. (See Stores.)

## MISCELLANEOUS

S. C., Columbia.—Clubhouse.—Ridgewood County Club let contract to F. D. McNulty, Columbia, to erect clubhouse; 65x142 ft.; 2 floors and balcony; ordinary construction; composition shingle roof; steam heat; cost \$15,000; heating and plumbing about \$2000; Urquhart & Johnson, Archts., Columbia. (Lately noted.)

Tex., Dallas.—Restaurant.—Krahl Construction Co., Chicago, general contractor to erect restaurant for John R. Thompson Co., Chicago, let following sub-contracts: Glass and glazing, Federal Glass & Paint Co.; structural steel, Austin Bros.; millwork, Buell Planing Mill Co.; wrecking (completed), Vilbig Bros.; all of Dallas; Benedict nickel work (nickel trim), Imperial Brass Mfg. Co.; ornamental iron (store front and miscellaneous iron), Chicago Ornamental Iron Co.; metal windows, E. A. Rysdon & Co.; lighting fixtures, R. Williamson & Co.; reinforcing steel, Concrete Steel Co.; plastering, McNulty Bros.; all of Chicago; revolving doors, Van Kannel Revolving Door Co., New York; glazed tile work, Houston Mantel & Tile Co., Houston, Tex.; granite, Pike River Granite Co., Amberg, Wis.; plans by Marshall & Fox, Chicago, call for 3-story-and-basement structure; concrete; tile walls; composition roof; concrete floors with tile finish; cost \$40,000. (Other contracts previously noted.)

Tex., Galveston.—Bathhouse, etc.—Joy Palace Amusement Co. (G. K. Jorgensen and others) let contract to Spence & Howe Construction Co., Port Arthur, Tex., for pile foundation for bathhouse, theater and amusement building; 220x243 ft.; reinforced concrete and tile; concrete roof and floors; heating undecided; cost \$113,000; I. A. Walker, Archt., Galveston; bids opened Jan. 20. (Lately noted.)

## RAILWAY STATIONS, SHEDS, ETC.

Ky., Jackson.—Louisville & Nashville Ry., W. H. Courtenay, Ch. Engr., Louisville, let contract to J. D. Fitzgibbon, St. Louis, to erect station; cost \$25,000.

Mo., St. Louis.—Terminal Railroad Assn. let contract to Fruin-Colnon Construction Co., St. Louis, to erect building at 605 Ranken Ave.; 2 stories; cost \$9000.

N. C., Madison.—Southern Rwy. Co., W. H. Wells, Ch. Engr. of Constr., Washington, D. C., let contract to Palmer-Spivey Construction Co., Augusta, Ga., to erect frame combination depot. (Lately noted.)

Okla., Durant.—St. Louis & San Francisco R. R., V. K. Hendricks, Engr., St. Louis, and Missouri, Kansas & Texas Ry., F. Ringler, Engr. M. W. Parsons, Kan., let contract to H. E. McCart, Concordia, Kans., to erect union depot; dark tapestry brick; light gray stone trimmings; light terrazzo flooring bordered with mosaic; cost \$35,000. (Previously noted.)

Okla., Claremore.—St. Louis, Iron Mountain & Southern R. R. is reported to have let contract to J. D. Fitzgibbons to erect proposed depot.

Tex., Beaumont.—Texas & New Orleans R. R. let contract to Wm. A. Brunet & Co., 505 Chronicle Bldg., Houston, to erect 500-ft. train shed; reinforced concrete; composition roof. (Lately noted.)

## SCHOOLS

N. C., Maxton.—Maxton Special School Dist. let contract to W. W. Blair, Bethune, S. C., to erect school building; cost \$13,500; bids for plumbing, heating and wiring will be received until Feb. 14; C. Gadsden Sayre, Archt., Anderson, S. C.

Tenn., Nashville.—Ward-Belmont School let contract to Foster & Creighton Co., Nashville, to erect dormitory addition; 3 stories; fireproof; 100 rooms; cost \$55,000.

Tenn., Nashville.—City let separate contracts to erect colored high school as follows: Concrete work, Adamant Stone & Roofing Co., at \$2450; brick work, Fulcher Brick Co., at \$14,728; electric wiring, Standard Electric & Machinery Co., at \$994; glazing, Warren Bros. Co., at \$310; plastering, H. Hardison & Co., at \$270; plumbing, East Side Plumbing Co., at \$5041; iron and steel work, Nashville Bridge Co., at \$2240; heating, Allen-Scales Engineering Co., at \$8093; all of Nashville; carpenter and mill work, G. W. McClanahan, at \$11,664; painting, Isaiah Smith & Co., at \$983; roofing and cut-stone contracts not let, bids in; plans by Chas. A. Gerguson, Nashville. (Noted in Dec.)

Tex., Houston.—City let contract at \$783 to J. J. Green, Houston, to erect Hollywood School; 3 stories; brick; fire escapes; 39x81 ft.; ordinary construction; felt and gravel roof; joist floor construction; city lights; also let contract at \$1032 to J. B. Collins Co., Houston, for plumbing, and at \$184.50 to Barden Electric & Contracting Co. for wiring; A. DeLisle, Archt., Houston. (Lately noted.)

Va., Norfolk.—St. Paul's Catholic congregation let contract to R. K. Revelle, Norfolk, to erect school building on King St. to be occupied by St. Joseph's Female Academy; 3 stories; fireproof; classrooms on first and second floors; auditorium on third; gymnasium in basement; brick, steel and concrete; cost \$30,000. (Noted in November.)

## STORES

Fla., Jacksonville.—Currier Investment Co., Greeley, Colo., let contract to Florida Engineering & Construction Co., Jacksonville, to erect store at 121 E. Bay St.; 62.6x80 ft.; mill construction; Barrett specification roof; cost \$10,000; W. M. Marsh, Archt., Jacksonville. (Contractor lately noted to erect this building.)

Ga., Tifton.—Rickerson Grocery Co. let contract to W. H. Spooner to complete building for which foundation has been constructed; 50x100 ft.; 2 stories; cost \$10,000.

Md., Baltimore.—Louis Applefeld let contract to Henry L. Maas, 1119 Ensor St., Baltimore, to alter building at 217-19 W. Baltimore St.; Louis Levi, Archt., Munsey Bldg., Baltimore; Real Estate Trust Bldg., Philadelphia.

N. C., Wilmington.—W. A. French let contract to Joe Schad, Wilmington, to erect building on N. 2d St.; 54x125 ft.; 2 stories;

brick construction with front of red pressed brick and ornamental trimmings; composition roof; hand-power elevator; cost \$10,000; B. H. Stephens, Archt., Wilmington. Address Contractor.

Okla., Ardmore.—C. F. Adams, Ardmore, Okla., let contract to J. A. Sumner, Ardmore, to erect store on Main St.; 50x100 ft.; ordinary construction; tar and gravel roof; cost \$5000; J. B. White, Archt., Ardmore. (Lately noted.)

Tenn., Memphis.—Wm. Kay, New York, let contract to erect store and office building. (See Bank and Office.)

Tex., Galveston.—Galveston Council 75, Knights of Columbus, let contract to remodel building for stores and lodgerooms. (See Association and Fraternal.)

Tex., Galveston.—Becker & Cohen let contract to Eubank & Dibrell, Galveston, to erect brick business building on Postoffice St. near 20th; 2 stories; 120x40 ft.; cost \$16,000; C. D. Hill & Co., Archts., Galveston.

Tex., Lufkin.—Lufkin Masonic Building Assn. let contract to erect store, office and lodge building. (See Association and Fraternal.)

Tex., Waco.—Walter G. Lacy let contract to W. J. Campbell to erect store building at 9th and Franklin Sts.; 59x75 ft.; brick; tar and gravel roof; natural-gas heat; cost \$10,000. (Lately noted.)

Va., Newport News.—Chrysson Bros., Smithburg, Md., let contract R. V. Richardson to erect store and apartment building on Washington Ave.; 25x90 ft.; 3 stories; ordinary construction; slag roof; steam heat; electric and gas lighting; cost \$10,000; H. E. Yessler, Archt., Hagerstown, Md. (Lately noted.)

Va., Petersburg.—Virginia Real Estate Corporation let contract to Fulton Brick Works, Petersburg, to erect store and rooming-house at Second and Bank Sts.; 58x130 ft.; ordinary construction; slag roof; electric lights; cost \$15,000; low pressure steam heat \$2500; S. Daly Craig, Archt., Petersburg.

Va., Pulaski.—Gary Laughon and C. H. Hoback let contract to latter to erect store and office building on 2d St.; 50x16 ft.; brick and wood; Carey roofing; cost \$3000; heating \$200; lighting \$250; F. F. Sterne, Archt., Pulaski.

## WAREHOUSES

Ga., Augusta.—Atlantic States Warehouse Co. let contract to T. O. Brown & Son, Augusta, to erect 25 additional compartments to warehouse; let contract to D. Shult, Augusta, for tin and metal roof; cost \$4000 to \$80,000. (Lately noted.)

Ky., Lexington.—C. B. Gillman let contract to erect building to replace warehouse occupied by John L. Calhoun & Co., 251 Vine St., noted burned, to Hendricks-More-Young Co., Lexington; mill construction; metal roof; electric elevator, \$2300; Marin Goertz, Archt., Lexington.

Md., Baltimore.—Canton Co. let contract to West Construction Co., Knickerbocker Bldg., Baltimore, to erect warehouse at Canton; 2 stories; 250x80 ft.; heavy timber construction and hollow tile.

Mo., Kansas City.—John Doherty let contract to P. J. Malory, 8th and Wyandotte Sts., to erect warehouse; 2 stories; 25x10 ft.; fireproof; asbestos roof; vapor vacuum heat; cost \$20,000; electric elevator \$800; Madorie & Birdsall, Archts., 832 Reserve Bank Bldg., Kansas City. (Lately noted under Stores.)

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

## "WANTS"

Advertising Novelties.—Post Printing Office, John Rowe, Columbus Barracks, O.—Addresses of manufacturers of or jobbers in advertising novelties, such as cheap cases, aluminum or imitation leather, etc.

Belting.—See Electric Motors, etc.—Wilmont Ventilating Co.

Boat Basin.—Treasury Dept., Jas. A. Wetmore, Acting Supvr. Archt., Washington, D. C.—Bids until Feb. 15 to construct boat basin at Galveston, Tex.; specifications, etc., on application to Custodian of U. S. Quarantine Station, Galveston, or to Treasury Dept., Washington.

Boiler.—Okolona Creamery Co., H. Taylor, Mgr., Okolona, Miss.—9 H. P. boiler.

Boiler.—Enamelled Metals Co., Pittsburgh, Pa.—Second-hand 250 H. P. boiler water-tube boiler.

Boilers.—See Crusher Plant, etc.—Southwestern Steam & Lme Co.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



**Boiler and Radiation.**—I. I. Carter, 19 Thornton Bldg., Bluefield, W. Va.—Prices on boiler and radiation for \$75.00 building.

**Boilers and Engines.**—See Pumps, etc. George A. Boyden Pump Co.

**Boiler.**—C. I. Robinson Ice & Cold Storage Corp., Winchester, Va.—Prices on 300 H. P. 200-lb. pressure second-hand water-tube boiler; in good condition; Hartford inspection.

**Brick (Face).**—I. I. Carter, 19 Thornton Bldg., Bluefield, W. Va.—Prices on face brick for \$75.00 dwelling.

**Bridge Construction.**—County Court, Kingston, Tenn.—Bids until Feb. 19 to construct 800 ft. concrete bridge across Emory River; plans, etc., obtainable from S. A. Braxton, Harriman.

**Buckets (Metal).**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—1000 galvanized iron or steel buckets; delivery Norfolk; schedule No. 9229.

**Building Materials.**—Geo. A. Boyden Pump Co., Geo. A. Boyden, Prest., Maryland Casualty Tower, Baltimore, Md.—Catalogues of building materials; for filling and reference while maturing plans to build pump manufactory.

**Cable.**—See Steel Bars, etc.—Patentee.

**Candy Machinery and Supplies.**—Gertrude Du Brau, Box 5, Cumberland, Md. Prices (wholesale) on chocolate, flavors, utensils, etc., for manufacturing candy.

**Capsules (For Bottles).**—Edgar Franklin & Co., 62 Basinghall St., London, E. C., England.—Capsules for bottles; probably to have large order to award.

**Car Wheels.**—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Feb. 15 to furnish car wheels, body bolster bearings, bed hinges, spring plates, bronze bars, sheet brass, Babbitt metal, copper tubing, nails, bolts, rivets, screws, nuts, washers and fire clay; blanks and general information relating to this circular (No. 1009) may be obtained from this office or offices of assistant purchasing agents, 21 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

**Charcoal Kilns.**—Edgar W. McCormick, 184 Kalorama Rd. N. W., Washington, D. C. Names and addresses of manufacturers of charcoal kilns; preferably portable kilns.

**Charcoal Kilns.**—John G. Duncan Co., 36 W. Jackson Ave., Knoxville, Tenn.—Catalogues and jobbers' prices on charcoal kilns; preferably portable.

**Clayworking Machinery, etc.**—Columbia Kaolin & Aluminum Co., Richard K. Meade, Engr., 202 N. Calvert St., Baltimore, Md.—Clayworking machinery; lumber; sand; gravel; for 100-ton kaolin, 50-ton bauxite and 5-ton alum daily capacity plant near Gordon, Ga.

**Coal Tar Products Plant.**—Caldwell Chemical Co., C. W. Caldwell, Prest., Sistersville, W. Va.—Bids (from contracting engineers and chemists) for complete construction plant manufacturing coal tar products; to cost about \$100,000; wire or write.

**Courthouse Furniture, etc.**—See Furniture and Fixtures.—W. L. Stevens.

**Confectionery Machinery, etc.**—Gerald S. Mack, 196 Sussex St., Sydney, N. S. W., Australia.—Correspond with manufacturers of confectionery machinery, manufactured products, etc.; view to representation.

**Creamery Equipment.**—Okolona Creamery Co., H. Taylor, Mgr., Okolona, Miss.—Creamery equipment, including ice-cream machinery.

**Crusher Plant, etc.**—Southwestern Stone & Lime Co., W. W. McElrath, Jr., Gen. Mgr., East Radford, Va.—Prices on boilers, pumps, steam engines, narrow-gauge locomotives, crushers, screens, air compressor, rock drills, water tank, light rails, buildings, etc., for quarry and crusher plant with daily capacity 1500 tons; open bids Feb. 1.

**Crushing Machinery.**—C. B. Hulet (Georgia-Carolina Limestone Co.), 189 E. Bay St., Charleston, S. C.—Prices on machinery for limestone-crushing plant.

**Cups (Sanitary).**—S. Patterson & Co., 6 Brookmouth Rd., Toronto, Ont., Canada.—Addresses of manufacturers of sanitary cups; cone-shaped preferred; prices in lots of 10,000 or more.

**Electric Motors.**—J. W. Johnson, Marianna, Fla.—One or two 15 to 20 H. P. good second-hand electric motors.

**Electrical Machinery.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—50 K. W. generator set; delivery Annapolis; schedule No. 9233.

**Electric Motors, etc.**—Wilmet Ventilating Co., Terry Bldg., Roanoke, Va.—Will buy electric motors, pulleys, belting, link chain, bearings and sheet steel 1-16-in. thick.

**Electrical Machinery.**—C. B. Hulet (Georgia-Carolina Limestone Co.), 189 E. Bay St., Charleston, S. C.—Prices on dynamo for limestone-crushing plant.

**Electrical Machinery.**—H. C. Dunn, Gen. Mgr., Moulton Water-works, Moulton, Ala.—19 H. P. "X" oil engine, special electric type, at 450 R. P. M.; 10 K. W. 3-phase, 60-cycle, 2300-volt A. C. dynamo; 9-10 K. W. exciter; four 1 K. W. transformers; 1½ K. W. transformer; all f. o. b. cars Hillsboro, Ala.

**Electrical Machinery.**—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Feb. 21 to furnish storage battery, motor generator set, switchboard, transformers, etc., at Mare Island; for proposals apply to Bureau or to navy pay office at San Francisco.

**Electrical Machinery.**—Lawrence Manning, Prest.-Mgr. Atlantic Engineering Co., Germania Bank Bldg., Savannah, Ga.—Prices on 35 K. W. to 50 K. W., 60-cycle, 2300-volt, 3-phase, belted second-hand A. C. generator, complete with exciter and rheostat; revolving field type preferred; first-class operative condition.

**Electrical and Gas Fixtures.**—I. I. Carter, 19 Thornton Bldg., Bluefield, W. Va. Prices on electrical and gas fixtures for dwelling.

**Engine (Oil).**—See Electrical Machinery.—H. C. Dunn, Gen. Mgr.

**Engine (Gasoline).**—See Hauling Outfit.—John G. Duncan Co.

**Engine.**—C. C. Penny, 1 S. 20th St., Birmingham, Ala.—Heavy duty Corliss engine; second-hand; about 30x42-in. belt wheel.

**Excavator (Tractor).**—Dade County Commrs., Z. T. Merritt, Clerk, Miami, Fla.—Bids until Feb. 8 to furnish tractor excavator to handle from 300 to 500 cu. yds. of rock daily; to be built on Brown-hoist principle, equipped with orange-peel dipper, able to lift load from depth of 5 to 10 ft. below surface, equipped with wheels to run on surface and not on rails, and capable of propelling itself; F. J. Magill, Deputy Clerk.

**Fertilizer Equipment.**—D. G. Ziegler, Son & Co., Engrs.-Archts., St. Matthews, S. C.—Prices and data on fertilizer equipment.

**Flooring, etc.**—Colonial Lumber Co., J. D. Wyrick, Mgr., Bearden, Tenn.—Shingles, laths, flooring, etc., for yard supplies.

**Furniture and Fixtures.**—W. L. Stevens, Archt., 212 Whitney-Central Bldg., New Orleans, La.—To correspond with courthouse furniture and fixture specialists relative to installation for 2 courthouses now under construction.

**Glove Machinery, etc.**—Royal Pressing Parlor, J. W. Hays, Mgr., 23 6th St., Bristol, Va.—Addresses of manufacturers of equipment and cloth to manufacture gloves.

**Gravel.**—See Clayworking Machinery, etc. Columbia Kaolin & Aluminum Co.

**Hauling Outfit.**—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Lowest dealers' prices, to buy or rent, on 2 m. 35-lb. steel relay rail; 20 to 30 H. P. gasoline engine and 2500 ft. ½-in. and ¾-in. wire rope, guaranteed to pull 7000 lbs. up 40 per cent. grade on trucks for timber hauling.

**Heating Plant.**—W. C. Hardison, Wadesboro, N. C.—Prices on hot-water, steam and hot-air heating plants for 5-room frame bungalow; estimates on installation complete.

**Heating System.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until Feb. 2 for heating system and minor alterations at garage and fire department repair shop, Maryland Institute Bldg., Center Market Space; drawings and specifications on file with J. J. Byrne, Inspector of Buildings.

**Household Articles, etc.**—J. H. Freeman, 257 West End Ave., New York, of F. Lavista & Freeman, brush manufacturers, London, England.—To correspond with manufacturers of articles his firm formerly purchased in Europe; these include household articles, brushes, toilet specialties, leather goods, purses, fancy metal goods, cheap jewelry, etc.; wants exclusive agencies for United Kingdom.

**Ice Plant.**—D. G. Ziegler, Son & Co., Engrs.-Archts., St. Matthews, S. C.—Prices and data on 15-ton ice plant.

**Laths.**—See Flooring, etc.—Colonial Lumber Co.

**Locomotives.**—See Crusher Plant, etc.—Southwestern Stone & Lime Co.

**Logs.**—Chas. R. Fife Co., 1012 Central National Bank Bldg., St. Louis, Mo.—White oak logs in quantities.

**Lumber.**—See Clayworking Machinery, etc.—Columbia Kaolin & Aluminum Co.

**Lumber Mat.**—Red River, Atchafalaya & Bayou Boeuf Levee Dist. Commrs., Howard B. Gist, Secy., Alexandria, La.—Proposals until Feb. 16 to construct and place subaqueous lumber mat for protection right bank of Red River in Rapides Parish; blank forms, information, etc., on application to Board State Engrs., New Orleans.

**Machine Tools.**—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Automatic cylindrical grinder, 3-ft. vertical surface grinder, 2 bench lathes, universal milling machine; delivery Pensacola; schedule No. 9223.

**Machine Tools.**—See Pump and Tank Works Equipment.—Hull Pump & Tank Co.

**Mantels and Tiles.**—I. I. Carter, 19 Thornton Bldg., Bluefield, W. Va.—Prices on mantels and tiles for dwelling.

**Manufactured Products.**—See Household Articles, etc.—J. H. Freeman.

**Metal-binding Machine.**—Victor E. de Castro, Manrique No. 58, Havana, Cuba.—Address of manufacturers of metal-binding machines used in paper or cardboard box factories; also export prices on metal staves.

**Metal-working Machinery.**—See Pump and Tank Works Equipment.—Hull Pump & Tank Co.

**Metal-working Machinery.**—The Electric Silver Workshop, Chhaganlal Maganlal, Mgr., Madangohats' Haveli No. 2807, Ahmedabad, India.—Data, prices, photographs, etc., of following: Machines to draw wires from copper, brass, iron, silver, gold and every other similar metal, working by hand, steam, gas or electric power; machines to draw sheets and plates from the same metals; invites lowest rates c. i. f. Bombay.

**Milling Machines.**—See Tools.—Charles Freck.

**Mining Machinery.**—R. M. Fletcher of R. M. Fletcher Stave & Lumber Co., Pine Bluff, Ark.—To buy miners' prospective outfit, including air compressor, mill, etc.

**Mixer.**—E. R. Horton, Jr., Engr. and Contr., Anderson, S. C.—Second-hand mixer of small size and one of large size with tractor.

**Nut-shelling Machine.**—E. M. Baggett, Box 155, Anguilla, Miss.—Information regarding machines for shelling pecan nuts; especially of large capacity; 25,000 to 30,000 lbs. daily.

**Oil Mill.**—D. G. Ziegler, Son & Co., Engrs.-Archts., St. Matthews, S. C.—Prices and data on 20-ton oil mill.

**Ornamental Glass.**—I. I. Carter, 19 Thornton Bldg., Bluefield, W. Va.—Prices on ornamental glass for dwelling.

**Painting.**—State Roads Commission, 601 Garrett Bldg., Baltimore, Md.—Bids until Feb. 9 for painting Sharpstown bridge over Nanticoke River, Dorchester and Wicomico counties; bids to be made on blank form contained in book of specifications; specifications and plans furnished by Commission for \$1.

**Paper (Crepe).**—Adolph Oettinger, Bahnhofstrasse 22, Zurich, Switzerland.—White crepe paper capable of withstanding moisture to some extent and still not be too hard; will use large quantities for article patented in Europe and U. S. A.

**Paving.**—Stephens Co., W. C. Rankin, Secy.-Treas., Charlotte, N. C.—Probably let contracts within 30 days for 35,000 concrete street paving.

**Paving Material.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until Feb. 2 to furnish Belgian or granite block during 1916; specifications and blank proposal sheets from office R. M. Cooksey, Highways Engr., City Hall.

**Paving.**—Town Council, Bath, W. Va.—Bids until Feb. 15 to construct 15,000 sq. yds. paving and necessary curbing inlets and storm sewers; 6-in. reinforced concrete, plain concrete and brick with concrete base; plans and specifications on file with Mayor of Berkeley Springs, W. Va.; specifications on application; J. A. Risinger, Mayor; C. L. Hunter, Recorder.

**Paving.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until Feb. 2 to grade, curb and pave, all on concrete base, following streets: Contract No. 126 (including sections of Stricker and Mosher Sts.), 48,700 sq. yds. sheet asphalt, 600 sq. yds. granite block, 3300 sq. yds. vitrified

block and 500 sq. yds. granite block repaving; Contract No. 127 (including sections of Bush, Wicomico and Conway Sts. and Columbia Ave.), 28,800 sq. yds. sheet asphalt, 2510 sq. yds. vitrified block, 2300 sq. yds. granite block and 2180 sq. yds. granite block repaving; Contract No. 128 (including sections of Baltimore, Calvert and Paca Sts.), 14,950 sq. yds. sheet asphalt, 6730 sq. yds. granite block repaving, 1650 sq. yds. vitrified block and 1900 sq. yds. granite block; Contract No. 129 (including sections of O'Donnell, Essex and Fleet Sts., Foster, Linwood and Montford Aves.), 47,050 sq. yds. sheet asphalt, 7550 sq. yds. granite block, 3400 sq. yds. vitrified block and 400 sq. yds. granite block repaving; specifications and proposal sheets from office of Paving Commission, City Hall, for \$5; plans and profiles on file with R. Keith Compton, Chmn. and Consult. Engr., Paving Commission.

**Paving.**—City of Clearwater, Fla., R. T. Daniels, City Clerk.—Bids until Feb. 9 for 400 sq. yds. vitrified brick paving with 4500 ft. concrete curb and gutters.

**Pipe.**—Dorrell Enterprise Co., Greensboro, Fla.—600 to 1000 ft. second-hand black 1-in. pipe; in good condition.

**Pipe (Terra-Cotta).**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—2000 ft. terra cotta pipe; schedule No. 9235.

**Plastering, etc.**—Dept. of Interior, Washington, D. C.—Bids until Feb. 3 for furnishing of labor and material, unless otherwise specified, required in plastering, painting and decorating 9th St. corridor, 3d floor, Patent Office Bldg., in accordance with specifications; copies obtainable from Ch. Clerk of Dept.

**Press (Orange).**—A. Paterno & Son, Dumaine and Chartres Sts., New Orleans, La.—Orange presses to extract juice from the fruit.

**Pulleys, etc.**—Okolona Creamery Co., H. Taylor, Mgr., Okolona, Miss.—Pulleys, shafting and hangers.

**Pumps.**—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Feb. 8 for water pumping outfit, radio receivers and wave meters at navy-yard.

**Pumps.**—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Six oil service pumps (schedule No. 9221), 2 condenser air dynamo pumps, 2 circulating distiller pumps, 3 main boiler tube pumps and 3 auxiliary feed pumps, each schedule No. 9222, delivery Brooklyn; 25 vertical simplex feed pumps, delivery Brooklyn, schedule No. 9230.

**Pump and Tank Works Equipment.**—Hull Pump & Tank Co., N. D. Hull, V.-P. and Gen. Mgr., Owensboro, Ky.—Probably be in market within 30 days for following: Automatic turret and engine lathe; millers; shapers; planers; boring mills; drill presses; gear cutters; grinders; polishers; pipe threaders; pipe cutters; multiple punches; rolls; riveters; transmission equipment, etc.

**Pumps, etc.**—City of Houston, Tex., Ben Campbell, Mayor.—Bids until Jan. 31 to install 2 centrifugal pumps and motors at N. Main St. water-works; specifications and information obtainable from E. E. Sands, City Engr.

**Pumps, etc.**—Geo. A. Boyden Pump Co., Geo. A. Boyden, Prest., Maryland Casualty Tower, Baltimore, Md.—Catalogues of all kinds of pumps; also of boilers and engines; for filling and reference while maturing plans to build pump manufactory.

**Quarrying Machinery.**—See Crusher Plant, etc.—Southwestern Stone & Lime Co.

**Railway Supplies.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Rails, steel, angle splice bars and guard rails, frogs, split switches, etc.; delivery Washington; schedule No. 9236.

**Rails.**—See Crusher Plant, etc.—Southwestern Stone & Lime Co.

**Road Construction.**—Wilcox County Commrs., Camden, Ala.—Bids to construct hard roads of clay and sand or clay and gravel from intersection point on Camden, Oak Hill and Pineapple Rd., and new proposed road to be constructed beginning at said intersection point and continuing toward Dallas county line via new bridge; also construct similar roads as above stated, beginning at Snow Hill Depot and extending toward Lowndes county line via Simpson's Mill, through Cunningham's and McDowell plantation, and beginning at Snow Hill depot and continuing toward Ackerville; profiles and specifications on file with J. N. Stanford, Probate Judge, by Feb. 14; Blair Hughes, Roads Supvr.

**Rails, etc.**—C. B. Hulet (Georgia-Carolina Limestone Co.), 189 E. Bay St., Charles-

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

ton, S. C.—Prices on rails; also spikes for sidetracks.

**Railway Equipment.**—Rush & Mineral Belt R. R., R. P. Sharpe, Ch. Engr., Cotter, Ark.—Rolling stock for railway between Cotter and Rush.

**Roofing and Ceiling.**—T. E. Olmstead, Heber Springs, Ar.—Prices on metal roofing and ceiling.

**Roofing.**—I. I. Carter, 19 Thornton Bldg., Bluefield, W. Va.—Prices on roofing for \$7500 dwelling.

**Rope (Wire).**—See Hauling Outfit.—John G. Duncan Co.

**Sand.**—See Clayworking Machinery, etc.—Columbia Kaolin & Aluminum Co.

**Sewer Construction.**—City of St. Louis, Mo., Room 315, New City Hall.—Bids until Feb. 4 to construct sewers in Glaise Creek Sewer Dist. No. 12; plans, specifications, form of contract and other information obtainable from office of Prest. Board of Public Service, Room 325, New City Hall.

**Sewer Construction.**—City of Houston, Tex., Ben Campbell, Mayor.—Bids until Jan. 31 to construct storm sewers on Noble and other streets; plans, specifications, blank forms, etc., obtainable from E. E. Sands, City Engr.

**Sewer Construction.**—Dept. of Public Finances, Accounting Div., A. G. Ricks, Commr., New Orleans, La.—Bids until Feb. 1 to construct sub-surface drains in Tulane University property from Robertson to Freret St., and in Freret St. to Audubon Pl.; plans and specifications on file with City Engr.; blank proposal forms obtainable from City Engr.

**Shingles.**—See Flooring, etc.—Colonial Lumber Co.

**Springs (Motor).**—J. D. Hendrix, Conradine Hotel, 10th and Oak Sts., Portland, Ore.—Several hundred springs for driving small machine; want to correspond with spring manufacturers.

**Steel Bars, etc.**—Patentee, Box 14, Tecumseh, Okla.—Reinforced concrete railway tie manufacturing materials as follows: Half-inch round soft bendable steel rod; 7-16-in. square twisted steel rod; 1/4 and 3/8-in. soft bendable steel bar; 1/2 and 5/8-in. soft steel bar; 2-strand twisted wire cable.

**Steel (Sheet).**—See Electric Motors, etc.—Wilmont Ventilating Co.

**Structural Steel, etc.**—The Panama Canal, Washington, D. C.—Bids until Feb. 10 to furnish structural steel, pig-iron, machine tools, hardware, nails, engineering specialties, fire brick, silica sand, rock salt, asphaltum, sand paper, lumber, etc.; blanks and information (circular No. 1008) obtainable from Gen. Purchasing Officer at Washington and assistant purchasing agents at 24 State St., New York; 614 Whitney-Central Bldg., New Orleans; Fort Mason and San Francisco; also from U. S. Engr. offices at Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; also at Commercial Club, Kansas City; Chamber of Commerce, Quincy, and Commercial Club, Tacoma.

**Structural Steel, etc.**—Panama Canal, Maj. F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Feb. 10 to furnish structural steel, pig-iron, hammers, pipe wrenches, drills, vises, saws, fire brick, lumber, etc.; screws, nuts, washers and fire clay; blanks and general information relating to this circular (No. 1008) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

**Surveying Instruments.**—Marshall Haney, Mining Engr., Geer, Va.—Surveying and other scientific instruments.

**Tractor.**—See Mixer.—E. H. Horton, Jr.

**Textile Machinery.**—W. T. Ligh & Bros., P. O. Box 121, Port Richmond, Staten Island, N. Y.—Correspond with manufacturers furnishing machinery for handling Chinese raw linen fiber.

**Tools.**—Charles Fred, 9 Selden St., Detroit, Mich.—Addresses of wholesale and retail tool dealers; especially tools for lathes and automatic machines; also milling machines, etc.

**Transmission Machinery.**—See Pump and Tank Works.—Hull Pump & Tank Co.

**Vacuum Cleaners.**—Kanawha Engineering Co., 222½ Capitol St., Charleston, W. Va.—Correspond with manufacturers of stationary vacuum cleaner plants; view to representation.

**Well-drilling Machinery.**—Pee Wee Oil & Gas Co., R. E. Burks, Engr., Pauls

Valley, Okla.—Prices on drilling machinery for wells up to 750 ft. deep.

**Woodworking Machinery.**—Miesner Lumber & Mfg. Co., N. D. Miesner, Mgr., Wittenberg, Mo.—Prices on second-hand thoroughly overhauled machinery for manufacturing lawn swings and other furniture.

## RAILROAD CONSTRUCTION

### RAILWAYS

Ala., Birmingham.—A late report that the Atlanta, Birmingham & Atlantic Ry. might build an extension into the Cahaba coal fields is denied as being without foundation.

Ala., Mobile.—Prest. J. M. Dewberry of the Tidewater Securities Corporation, Mobile, says its immediate plans contemplate completion of its railroad from the Mobile & Ohio R. R. at Alabama Port to Cedar Point, about 3¼ miles, which is nearly finished; also extension from there to Dauphin Island and the site of the proposed coaling station at the eastern end thereof.

Ala., Montgomery.—Louisville & Nashville R. R. will double-track main line between Montgomery and Calera, Ala., 63 mi. Estimated cost \$2,000,000. Work to start soon. H. C. Williams is Ch. Engr. of Constr. at Louisville, Ky.

Ark., Cotter.—Cotter, Rush & Mineral Belt Ry. Co. will build 15 mi. line from Cotter to Rush, Ark., including one steel bridge over Crooked Creek in Marion county. Country rough. Directors, Howard H. Gallup, Prest.; E. B. Griswold, V. P.; E. J. Loop, Treas.; C. E. Hopkins, Secy., and J. H. Strider, all of Cotter. R. P. Sharpe is Gen. Mgr.

Ark., Eureka Springs.—Kansas City Southern R. R. is expected to build branch to potash and zinc fields near Eureka Springs. C. E. Johnston, Kansas City, Mo., is Ch. Engr.

Ark., Eureka Springs.—Missouri & North Arkansas R. R. denies that it would build a line from Eureka Springs to phosphate fields. It has no construction plans.

Ark., Van Buren.—The St. Louis, Iron Mountain & Southern R. R. (Missouri Pacific System) will, it is reported, rebuild its line between Van Buren and Coffeyville, Kans., at an estimated cost of about \$80,000. Ninety-pound rails are to be laid. E. A. Hadley, St. Louis, Mo., is Ch. Engr.

Ga., Cornelia.—Southern Ry. contemplates revising line and grades between Cornelia and Toccoa, Ga., and also beyond Toccoa to the Tugaloo River, a total distance of about 22 mi., at an estimated cost of between \$2,000,000 and \$3,000,000. Line will be shortened to about 19 mi. This is part of the double-tracking plan for the Atlanta & Charlotte Air Line. W. H. Wells, Washington, D. C., is Ch. Engr. of Construction.

Ga., Gordon.—The Columbia Kaolin & Aluminum Co., 708 14th St. N. W., Washington, D. C., owning clay and bauxite deposits near Gordon, McIntyre and Irwinton, Ga., will build 3-mi. narrow-gauge railroad from the mines to Gordon. Survey is made. Richard K. Mende, 202 N. Calvert St., Baltimore, is Engr. Company officers are Fred S. Swindell, Prest.; Chas. D. Cagle and Thomas Hampton, V. Ps.; M. C. Van Fleet, Secy., and Jas. N. Thompson, Treas.

Ga., Elberton.—Contract let to Nichols Construction Co. of Atlanta for extensions of Elberton & Eastern R. R. from Tignall to Lincolnton, Ga., 17 mi., and from Tignall to Washington, Ga., 12 mi., requires about 12,000 cu. yds. of excavation per mile. Maximum grade 1 per cent.; maximum curvature 4 degrees. Construction to begin immediately. Alex. Wilson, Elberton, is Ch. Engr.

Ga., Lyons.—J. H. Rowland of Wrightsville, Ga., one of the incorporators of the Atlantic & Northwestern Ry. Co., says its proposed line is estimated to be 190 mi. long from Brunswick to Milledgeville, Ga., via Lyons, Gillis Springs, Adrian, Wrightsville and other places. Route mostly level. Date not yet fixed to receive bids for construction, etc. No definite steps taken in the plan, as application for charter has just been made.

Ky., East Bernstadt.—Cumberland & Rockcastle River R. R. of East Bernstadt is reported about to build an 8-mi. extension from Bond, in Jackson county, to develop timber lands.

Md., Hagerstown.—Norfolk & Western Ry. will, it is reported, lay additional sidings at Hagerstown at a cost of about \$20,000. J. E. Crawford, Roanoke, Va., is Ch. Engr.

Mo., Kansas City.—Kansas City & Tiffany Springs Ry. Co. has applied to the Public Service Commission for authority to build its proposed line from Kansas City to Tiffany Springs, Mo., 15 mi. T. N. Smith, Chas. J. Smith, Baylis Steele and C. W. Chandler,

all of Kansas City, and others are interested.

Mo., Moberly.—Chicago, Burlington & Quincy R. R. is reported considering construction of lines from Mexico to Moberly, Mo., 25 mi.; Monroe to Moberly, 50 mi., and Moberly to Liberty, Mo., about 110 mi. In lieu of the latter, a traffic arrangement might be made with the Wabash. W. L. Breckinridge, Chicago, Ill., is Engr. Maint. of Way.

N. C., Andrews.—Contract is reported let to J. N. Baker of Knoxville and A. M. Cook of Harriman, Tenn., to lay track and equip the Hiwassee Valley Ry. from Andrews to Hayesville, N. C., 25 mi. S. E. Cover is Prest. and F. A. Cloud Ch. Engr.

S. C., Cross Anchor.—Construction of a railroad from Spartanburg to Walnut Grove, Cross Anchor and Clinton, S. C., is reported under consideration by Northern capitalists. L. H. Wilson of Cross Anchor or T. B. Thackston of Cedar Springs, S. C., may give information.

Tex., Corpus Christi.—J. J. Caswell has deposited \$5000 with the City Council to guarantee construction of the electric railway projected by him and associates from Corpus Christi to Wards Island, S. mi.

Tex., Houston.—Expenditures of the Southern Pacific Lines in Texas this year will, it is stated, be more than \$3,000,000, including about \$2,000,000 for relaying 281 miles of track with 90-pound rails, \$300,000 for bal-

lasting 150 miles, \$230,000 for sidetracks and spurs and other items. W. B. Scott, Houston, is Prest.

Tex., Midland.—Midland & Northwestern Railway Co., capital \$65,000, has filed charter to build from Midland to Seminole, Tex., 6 mi. Headquarters at Midland. Incorporators: Thomas J. O'Donnell of Sweetwater, Tex.; W. J. Moran, B. C. Gridley, E. F. Elkin, W. H. Brunson, B. F. Whitefield, J. A. Hunter, H. N. Garrett, J. A. Haley and W. B. Elkin, all of Midland.

Tex., Palestine.—W. H. Mitchell and others, all of Palestine, contemplate building the projected railroad from Palestine to Corsicana, Tex., about 120 mi., on which some work was done some time ago.

Tex., San Antonio.—Missouri, Kansas & Texas Ry. will build new terminal at San Antonio and improve the roadbed between San Antonio and Austin, Tex. L. F. Lombard, Dallas, Tex., is Ch. Engr.

Va., Big Stone Gap.—Contract is let to L. O. Pettit of Big Stone Gap by the Interstate R. R. Co. to build a spur 1 mi. long from a connection with the Virginia & Southwestern Ry., near Imboden, up Pigeon Creek, for lumber and coal development. R. E. Rhoads is Ch. Engr. at Big Stone Gap.

Va., Radford.—Radford-Willis Southern R. R. Co. has authorized a bond issue of \$300,000 and charter is to be amended to permit extension to Mount Airy, N. C., about 30 mi. J. L. Vaughan is Prest. and T. W. Simpson, Ch. Engr., at Radford.

W. Va., Wyatt.—Fairmont-Bingamon Ry. Co., authorized capital \$400,000, is incept, to build a line from a connection with the Baltimore & Ohio R. R. at Hutchinson to Wyatt, 8 mi.; incorporators, M. C. Byers, C. H. Porter, J. T. Middleton, H. L. Herman and H. V. Fleagle, all of Baltimore, Md. This is one of the lines to be built by the Western Maryland Ry., of which H. R. Pratt, Baltimore, is Ch. Engr.

## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

### Warren Bros. Company Removes Office.

Announcement of the removal of its main office, Boston, to 112 Berkeley St., the same city, is made by the Warren Bros. Company, owners of rights on and contractors in bitulithic paving for streets and Warrenite for roads.

### Completing Big Lumber Plant.

Within two months the Graham County Lumber Co., Andrews, N. C., expects to complete its plant for manufacturing hemlock and hardwoods. About \$150,000 is the cost of the equipment of machinery being installed and the daily capacity will be 100,000 feet of lumber. T. H. Smith, formerly of Bay City, Mich., is the company's engineer in charge.

### Business Directory of India.

In order to center attention in the trade possibilities of India, Khosla Bros. of Lahore have published a little booklet, "How to Win Indian Trade." This deals with the agricultural, mineral and industrial resources of India, and shows the opportunities existing in that country for business and how the business interests can be reached through Khosla's Commercial Directory for 1916, which will be published on or about March 31 and will be sold at the price of 12 shillings per copy (post free).

### Increased Earnings of Public Utilities Company.

W. S. Bartow & Co., Sandusky, O., managers and financiers of public utilities companies, report some of their subsidiaries as having increased earnings during 1915, prominent among these being the General Gas & Electric Co., holding operations in Vermont, New York, Pennsylvania, Ohio. The latter company added over 10 per cent. to its earnings of the previous year and paid a quarterly dividend of 1.75 per cent. on the cumulative preferred stock and past accumulations amounting to .55 per cent., placing the stock on a regular 7 per cent. basis. The Eastern Pennsylvania Power Co., Dover, N. J., recently closed a contract with the International High-Speed Steel Co. to supply cur-

rent for 1200-kw. Heroult-type electric furnace which the latter company is to operate at Rockaway, N. J. This is regarded by the power company as in itself an important contract and to be probably the forerunner of others like it.

### Roanoke Iron Works.

The Roanoke Iron Works, Inc., Roanoke, Va., successor to the Rock Hill Foundry & Machine Co., Inc., and the Roanoke Foundry & Machine Co., Inc., in addition to making architectural steel maintains a repair shop in which it makes a specialty of repairs to all kinds of machinery. It also operates a gray-iron and brass foundry in connection with a shop, which enables the supplying of new parts for machinery of all kinds on short notice. A full stock of steel pulleys, hangers, shafting, collars and transmission equipment is carried.

### New Orleans Hotels Set an Example.

New Orleans has something besides its delightful climate and the atmosphere of romance which surrounds the city to attract and hold visitors, and that is its good hotels. Experienced travelers would very much like to have the hotel proprietors of the country, and particularly those who offer such unspeakably bad accommodations as some of them do, visit the St. Charles or the Grunewald at New Orleans and take a few lessons in the way a hotel should be run. The St. Charles has been famous for generations and the Grunewald has earned a reputation that puts it in the front rank of good ones. It has a million and-a-half dollar building that is kept as it should be, and its cuisine is unsurpassed.

### Supplies and Machinery Office Opened.

S. M. Price and T. J. Pratt, the former previously with the Henry Walke Company, railroad and mill supplies, Norfolk, Va., before which the two were together in the machinery firm of the S. M. Price Company, Norfolk, have formed the firm of Price & Pratt, 301-2 Bank of Commerce Bldg., Norfolk, to handle the lines of the following



Philadelphia concerns: Standard Supply & Equipment Co., mill, railroad and contractors' supplies; H. Belfield Company, manufacturers of steam specialties, pipe and fittings; Philadelphia Belting Co., leather belting; Morris Wheeler & Co., iron and steel bars and sheets, boiler tubes; Thropp Bates, self-adjusting hinge metal piston packing. Also new and second-hand wood and iron-working machinery will be handled. A feature of the new firm's service will be prompt and complete delivery, made possible, it is claimed, by the large stocks carried by the companies represented.

#### Successful Pulverizing.

What is claimed to be a record in pulverizing was recently made by a K-B pulverizer, manufactured by the K-B Pulverizer Co., Inc., 56 Worth St., New York City. The performance was under the supervision of the Chas. Warner Co., at Cedar Hollow, Pa., and consisted of reducing lump lime from 3 inches to 3/16 of an inch with power consumption of a fraction over 1 ton per horsepower hour, which is considered especially creditable in view of the small capacity of the machine, about 13 tons an hour. The pulverizer is built entirely of steel and is lined throughout with specially hardened manganese steel plates to insure its durability. The hammers are said to be easily adjusted to compensate for wear and the screens readily removed to afford access to the inside of the machine. The Chas. Warner Co. has ordered two of the No. 1 K-B pulverizers to be installed at the new Cedar Hollow plant. The K-B Pulverizer Co. reports a growing demand for its hammer mill and expects the spring season to be a busy one.

#### Oakum and Fiber Companies Combined.

The Baltimore Oakum Co., established in 1852 by N. B. Woolford, and the Baltimore Fiber Co., established later, have been brought together under the name of the N. B. Woolford Oakum Co., Inc. Mr. Woolford continues actively in the new company as president, and Mr. C. H. Hawkins, long associated with him in the two old companies, takes the position of secretary and treasurer. The new company will carry on the combined business of the Baltimore Oakum Co. and the Baltimore Fiber Co. at the old address, 601 S. Luzerne Ave., Baltimore, and will continue the manufacture of marine and plumbers' oakum, hemp and cotton fibers, as well as jute and hemp, cotton waste, reeled gunny bagging, for covering cotton, and burlap bagging, etc. The joining of the two companies under one corporate management is due to the desire of co-ordination of the two branches of the business to facilitate the manufacturing and distribution of the various products and to take care of the increasing demand for the oakum and fiber products heretofore made by the two companies.

#### M. & W. Oil Engine Installations.

A large number of M. & W. oil engines, manufactured by the August Metz Machine Works, 129 Mott St., New York City, have recently been installed, among the purchasers being the following: Melchior, Armstrong & Dessau, 30 and 45 H. P.; American Steamship Line, two 35 H. P. direct-connected generator sets; Atlantic Fruit Co., 12 H. P. generator sets (this concern has several M. & W. oil engines in operation); American Trading Co., one 30 H. P. engine; all these of New York City; Wayne Cold Storage Co., East Williamson, N. Y., 80 H. P.; Dill Machine Co., Philadelphia, Pa., 50 H. P.; American Mineral Co., Johnson, Vt., 100 H. P. (this plant has also an 80 H. P. M. & W. engine); Pennsylvania Railroad Co., Altoona, Pa., eight 40 H. P. engines, direct connection with generators; Shipley Construction & Supply Co., Brooklyn, N. Y., three 50 H. P. single-cylinder horizontal engines; Baer Bros., Stamford, Conn., one 150 H. P., making the second unit of this size in the plant; McCrory Machinery Co., Seattle, Wash., two 150 H. P. direct reversible marine engines; Swayne & Hoyt, San Francisco, Cal., one 200 H. P. direct reversible marine engine; Harding Creamery Co., Omaha, Neb., one 150 H. P.; Hind Steel and Wire Works, Huntington, L. I., 50 H. P., the second of these units in this plant; Albert R. Reynolds, Silver Lake, N. H., 50 H. P. These engines took the Medal of Honor at the Panama-Pacific Exposition. They are in extensive use by the United States and foreign Governments, as well as by private interests in all classes of service. Simplicity and economy form the keynote of the claims made for them. Operation is sustained on kerosene, crude oil, fuel oil or alcohol distillate without carbureting apparatus, the usual mixing valves or electric ignition. The preliminary air compression for scavenging

takes place in the crank case, done by the downward movement of the piston. Ignition is started by means of external heating of the ignition ball, after which it is automatically maintained.

#### TRADE LITERATURE

##### Hoist Catalogue.

Wright high-speed steel hoists of from 1,000 to 40,000 pounds lifting capacity, traveling hand cranes and overhead trolleyways are described and illustrated in catalogue No. 7 recently issued by the Wright Manufacturing Co., Lisbon, O. Highest quality of material, correct design and workmanship are claimed to make this hoist one of exceptional merit.

##### Pump Catalogue.

Reliability, durability, convenience and efficiency are prominent characteristics claimed for the Hayton centrifugal pumps, built by the Dayton-Dick Co., Quincy, Ill., in a catalogue issued by that company describing its centrifugal pumps of various sizes and types. Speed range and power tables and performance plottings show the exact capabilities of the pumps.

##### Electrical Year Book.

The Western Electric Co. of New York City has distributed its 1916 yearbook, continuing the practice instituted in the 1915 book of giving a simple series of list prices upon which a basic discount applies, a plan found most successful by the company. The volume is 1594 pages, with stiff binding. In one section of it are listed all the sales helps that the company furnishes its agents. Forty-nine thousand volumes of the edition were issued.

##### Whalen Form Catalogue.

Cutting the cost of culvert construction to the minimum while maintaining the greatest strength is what is claimed by The Whalen Form Co. of Syracuse, N. Y., for its steel concrete culvert forms in a recently issued catalogue that contains, besides illustrations and description of the form, views of concrete culverts built with it and recommendations from public officials and private concerns. The form received the medal of highest award at the Panama-Pacific Exposition.

##### Hollow Metal Doors.

A booklet on the finishing touch in fireproofing a building has been issued by the Dahlstrom Metallic Door Co., Jamestown, N. Y., urging the advantages of fireproof doors and holding hollow steel doors to be the only absolutely fireproof yet devised and put on a commercial basis. Besides being proof against fire these doors are claimed to be of permanent, non-rusting quality and are made in attractive designs and finishes. Literature will be mailed on request to the company.

##### Shaft Coupling.

The extreme simplicity of the Bull Dog shaft coupling is well illustrated by the fact that it is fully explained in three pages of text and two illustrations of a small catalogue issued by the manufacturer, the Automatic Shaft Coupling Co., Alexandria, Va., and the Campbell Machinery Co., 57 Beekman St., New York City, sole selling agent. The catalogue describes and illustrates the Bull Dog collar set and pulley bushings also. References from leading railroads and large manufacturers are given.

##### Portable Band Sawmill.

A catalogue issued by the Portable Band Sawmill, Inc., 239 E. 56th St., New York City, describes the Brysare portable band sawmill and claims it to be the only machine of its kind manufactured. The mill is made very light, so that it can be mounted on wheels and hauled by one team. The special features brought out in the catalogue are the saving in "hauling 1 load of mill to 100 loads of timber instead of 100 loads of timber to the mill," saving in wood owing to the narrow, clean cut of the bandsaw and in labor.

##### Cast-Iron Column Catalogue.

In compliance with a growing demand for dimensions, prices, data on safe loads, etc., of Keystone cast-iron columns, the U. S. Cast Iron Pipe & Foundry Co., Burlington, N. J., has issued a pamphlet for ready reference on the subject. It contains the common information about the columns most frequently required by architects and builders, under the topics named above, and notes concerning the special advantages claimed for Keystone columns, one of the chief of which is the method of casting ver-

[Continued on Page 70.]

## FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

#### FINANCIAL CORPORATIONS

Ala., Pratt City.—A new bank is reported being organized by E. F. Childers, Jefferson Bank Bldg., Birmingham.

Fla., Cottondale.—Planters' Bank, capital \$15,000, is being inc'd. by J. W. Hinson, R. W. Mercer, A. J. Cobb and others.

Fla., Jacksonville.—Jacksonville Adjustment Bureau has made application for charter; capital \$500; J. D. Holmes, Pres.; F. C. Groover, V. P.; J. W. Pettyjohn, Secy. and Treas.

Fla., La Belle.—Bank of La Belle, capital \$12,000, is organized with D. L. Skipper, Pres.; E. Watts Hall, V. P.; J. R. Doty, Cash.

Fla., Miami.—A new bank and trust company is being organized with capital of from \$100,000 to \$150,000. Among those interested are L. T. Higleyman, C. M. Busch of New York and Atlantic City; Frederick Haberman, New York; Mrs. Harriett Beers, St. Louis; J. A. Moore, F. M. Jeffords and E. A. Duncan.

Ga., Hawkinsville.—Hawkinsville Investment Co. has made application for charter; capital \$30,000, with privilege of increasing to \$500,000; petitioners, E. J. Henry, W. N. Parsons, J. J. Whitfield and T. B. Ragan.

Ga., Sylva.—National Bank of Sylva has been approved; capital \$25,000.

Ga., Sylva.—National Bank of Sylva chartered; capital \$25,000; organizers, P. R. Kittles, A. R. Roberts, R. W. Nunnally, G. M. Hill and A. B. Lovett. Business is to begin soon.

Ky., Russellville.—Southern Deposit Bank is organized to take over business of National Deposit Bank; capital \$25,000; Geo. B. Edwards, Pres.; R. F. McCuddy, V. P., and Russell S. Edwards, Cash. Business has begun.

La., Lake Charles.—Southwest Louisiana Farm Mortgage Co. is organized with \$250,000 capital to take over the mortgage loan business of the Calcasieu Trust & Savings Bank, which is to be consolidated with the Calcasieu National Bank. (Recently noted.) Officers of the new concern are: J. A. Bel, Pres.; Frank Roberts and Geo. A. Courtney, V. Ps.; R. L. Male, Secy.

La., Shreveport.—City National Bank is chartered; capital \$400,000; J. B. Ardis, Pres.; J. H. Jordan, V. P., and William L. Young, Cash.

N. C., Winston-Salem.—Insurance Service Co. of Winston-Salem is chartered; capital \$45,000; incorporators, J. O. Cobb, W. Ray Johnson and W. G. Jerome.

Okla., Beggs.—Exchange State Bank began business Jan. 12; capital \$25,000; surplus \$1250; directors, W. H. Reading, Pres., Beggs; J. C. Doneghy, St. Louis, V. P.; W. G. Reynolds, Cash.; H. Garwood, Jr., Beggs.

Okla., Peckham.—Peckham State Bank, capital \$10,000, began business Jan. 11; C. A. Gwinn, Pres.; F. R. Zacharias, V. P., and Paul B. Bach, Cash.

S. C., Columbia.—Southern Investment Co. has been granted a commission to do a general real estate business; capital \$10,000; petitioners, Dr. L. B. Owens and Mrs. Clara P. Owens.

S. C., Georgetown.—Guarantee Building and Loan Assn. commissioned; capital \$50,000; petitioners, W. D. Morgan, J. I. Hazard, J. R. Smith and W. R. Bull.

S. C., Lodge.—People's Bank of Lodge commissioned; capital \$15,000; petitioners, C. F. Rizer and Carrie B. Rizer.

S. C., Orangeburg.—Orangeburg Realty & Insurance Co. has been granted a commission; capital \$5000; petitioners, W. G. Smith, Whitford Smith and M. E. Seigler.

Tenn., Nashville.—The Mercantile Protective Association has made application for charter; capital \$10,000; incorporators, Walter Sanford, P. G. Ellison, E. J. Baker, E. L. Holt and W. E. Norvell, Jr.

Tenn., Nashville.—Dudley-Fite-Metzger Co. has changed its name to the Dudley-Mahoney Co.; incorporators, Gifford Dudley, D. E. Mahoney, D. H. Butterfield, S. S. Hudson and S. G. Holland.

Tex., Aycox.—Guaranty State Bank has begun business; capital \$10,000. Will W.

Brown of Dallas, Tex., is Cash. and J. E. Meadow Asst. Cash.

Tenn., Dowlstown.—Dowlstown Banking Co., capital \$12,000, is authorized to do business; J. F. Turner, Pres.; J. C. Starke, Cash.

Tex., Dallas.—Liberty Investment Co. is chartered; capital \$50,000; incorporators, D. D. Rogers, J. W. Royall, Cecil Casey, Edwin Hobby and others.

Tex., Junction.—First National Bank has made application to organize; capital \$25,000; organizers, Emil A. Loeffler, A. J. Moss, Adam Murr, J. S. Jones and Frank Baker.

Va., Hopewell.—A private bank, to be located at Hopewell and Broadway Sts., is being organized by Constantino, Rendano & DiSa Co.

Va., Richmond.—Richmond Trust & Savings Co., Inc., has made application to change its name to the Richmond Trust Co. E. L. Bemiss is Pres.

Va., Richmond.—Industrial Savings & Loan Co., capital \$15,000, is being organized by M. Lee Norvell, Irvin L. Sutherland, George S. Barnard, W. A. Roper, John A. Cuthins, Robert E. Anderson, Dr. Charles A. Ladenberg and others.

#### NEW SECURITIES

Ala., Bay Minette.—\$300,000 5 per cent. 30-year Baldwin county road bonds are voted; also \$55,000 Delta road and bridge bonds. J. H. Smith is Judge of Probate, County Commrs.

Ala., Birmingham.—Bids will be received until noon Feb. 5 by H. C. Henry, Clerk Board of Education, for \$15,000 5 per cent. school bonds.

Ala., Camden.—\$22,000 6 per cent. 10-year municipal-improvement bonds are reported sold. E. W. Berry is Mayor.

Ala., Fairhope.—Bids will be received until Feb. 1 by A. O. Berglin, Mayor, for \$13,000 6 per cent. water and light bonds.

Ala., Mobile.—\$150,000 Mobile county school bonds are voted. Address A. G. Ward, care of Board of Revenue and Road Com.

Ala., Montgomery.—\$1,500,000 bonds for payment of Alabama State's floating indebtedness defeated.

Ala., Montgomery.—\$300,000 4 1/2 per cent. 30-year \$1000 denomination bonds for funding floating indebtedness are voted. Date for opening bids not yet decided. E. J. Devinney is City Clerk.

Ark., Marion.—\$470,000 bonds Drainage Dist. No. 2, Crittenden county, have been purchased at par by William R. Compton & Co., St. Louis.

Ark., McCrory.—Bonds of Bayou De View Drainage Dist. in Jackson, Cross and Woodruff counties will be placed on sale Feb. 16 at McCrory. G. A. Burr of Paragould is Atty. for the Dist.

Fla., Clearwater.—Election is to be held Feb. 7 to vote on \$50,000 5 per cent. 30-year \$500 denomination refunding bonds, dated Apr. 1, 1916, and maturing 1946. Address R. T. Daniel.

Fla., De Land.—\$50,000 Seabreeze-Daytona Beach and \$12,500 Lake Helen School Dist., Volusia county, bonds are soon to be offered. Geo. F. Crouch is Chmn. Board Public Instruction Volusia County.

Fla., Eustis.—\$60,000 6 per cent. 10-30-year \$1000 denomination sewer and paving bonds have been purchased jointly at \$63,700 by the Atlantic National Bank, Jacksonville; Citizens' Bank of Eustis, and Citizens' Bank, Leesburg.

Fla., Fort Pierce.—\$40,000 6 per cent. \$1000 denomination bonds Special Tax School Dist. No. 6, St. Lucie county, have been purchased at \$42,210 by R. M. Grant & Co., Chicago, Ill. J. W. Hodge is Secy. and Supt. Board Public Instruction St. Lucie County.

Fla., Jacksonville.—\$293,380.56 5 per cent. \$1000 denomination Duval county bonds, maturing 1946, have been purchased by the Heard National Bank, Jacksonville, at \$25,508 premium.

Fla., St. Petersburg.—\$30,000 Dist. No. 3 school-improvement bonds are voted. Address Board of Trustees.

Ga., Americus.—Election will probably be called to vote on \$30,000 street-improvement bonds. Address The Mayor.

Ga., Fitzgerald.—Regarding report that election is to be called to vote on school bonds, J. E. Turner, Pres. Board of Education, writes that it will probably be 90 days before bonds are issued. About \$20,000 will be the limit.

Ga., Rome.—Election will be held Feb. 29 to vote on \$40,000 5 per cent. 30-year auditorium and city hall bonds; denomination

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Ga., Summit.—\$5000 5 per cent. electric-light bonds have been purchased at par by Singleton, Smith & Co., Macon.

Ga., Tifton.—\$30,000 high-school bonds are voted. Address The Mayor.

Ky., Hopkinsville.—Election is to be held in Christian county Feb. 18 to vote on \$400,000 road bonds. Address County Commrs.

Ky., Morganfield.—Steps are being taken to hold an election in Union county Apr. 1 to vote on \$450,000 5 per cent. 5-30-year road bonds; denomination not less than \$100 nor more than \$1000. Address County Commrs.

Ky., Murray.—Election is to be called to vote on electric-light plant bonds. Address The Mayor.

Ky., Providence.—\$20,000 6 per cent. electric-light-plant bonds have been purchased at a premium by Well, Roth & Co., Cincinnati.

Ky., Whitesburg.—Steps are being taken to call an election the latter part of March to vote on \$150,000 Letcher county road bonds. Henry T. Day is County Judge.

La., Lafayette.—\$50,000 water and fire protection, \$35,000 school, \$15,000 park and \$80,000 sewerage bonds will probably be issued. Address Mayor Girard.

La., Lafayette.—Bids will be received until noon Feb. 1 by L. J. Alleman, Supt. Lafayette Parish School Dist., for \$8000 5 per cent. 1-10-year \$800 denomination bonds.

La., Lake Charles.—\$125,000 5 per cent. 1-37-year \$500 denomination high-school bonds have been purchased at par, \$1000 and accrued interest by Dewitt, Tremble & Co., Chicago. E. F. Taylor is Pres. Board of Education.

La., New Iberia.—Election is to be held March 2 to vote on \$90,000 sewer bonds. Address The Mayor.

Md., Baltimore.—It is contemplated to issue a city loan of from \$1,000,000 to \$1,500,000 to erect new school buildings and improve others. J. H. Preston is Mayor.

Mo., Washington.—\$60,000 4½ per cent. 5-20-year water-works bonds have been purchased at par by the Bank of Washington.

Md., Rockville.—Application is to be made to the Legislature for authority to issue \$50,000 Montgomery county road school bonds. Address County Public School Commissioners.

Miss., Brookhaven.—\$150,000 Lincoln county road bonds will probably be issued. Address Board of Supervs.

Miss., Philadelphia.—Election is to be held Feb. 1 to vote on \$30,000 water-works bonds. Address The Mayor.

Mo., Marshall.—\$1,310,000 Saline county road bonds defeated.

Mo., Ozark.—\$40,000 5 per cent. 8-mi. Special Road Dist. (Billings), Christian county, bonds defeated.

N. C., Columbus.—Bids will be opened Feb. 21 for \$8000 4½ or 5 per cent. 20-year \$500 and \$1000-denomination bonds Columbus High School Dist., Polk county, bonds, dated Jan.

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10, 1916. Address E. W. S. Cobb, Clerk Board of Education.

N. C., Raleigh.—\$100,000 Raleigh township school bonds have been approved by Commissioners Wake County.

N. C., Raleigh.—A committee has been appointed to negotiate sale of \$50,000 first-mortgage bonds authorized by last Legislature for improvement of State Fair grounds. Chief Justice Walter Clark is one of the committee.

N. C., Washington.—Bids will be received until noon Feb. 7 by W. E. Swindell, Chrmn. Board Commrs. Beaufort County, for \$50,000 5 per cent. 20-year Washington township road bonds; voted Jan. 4, 1916; denomination not to exceed \$1000; dated Feb. 1, 1916.

N. C., Washington.—Bids are being received until noon Feb. 7 by Board Commrs. Washington Township, Beaufort county, W. E. Swindell, Chrmn., for \$50,000 5 per cent. 25-year road bonds.

Okla., Chickasha.—Wm. F. Ramsey, Chickasha, writes the Manufacturers Record that \$50,000 bonds have been sold at par and \$1307.50 premium to Geo. W. Pierson, Oklahoma City.

Okla., Chickasha.—Bids will be received until March 1 by William Ramey, Secy. Board of Education, for \$10,000 5 per cent. 20-year school bonds.

Okla., Claremore.—Rogers county road bonds have been purchased at par by Speer & Son, Little Rock and Chicago, as follows: \$18,000 Catoosa township, \$30,000 Inola township, \$50,000 Collinsville township, \$50,000 Chelsea township, \$25,000 Foyil township, \$50,000 Verdigris township.

Okla., Commerce.—\$4000 water-works bonds have been sold at par. Recent reports gave amount as \$42,000. D. Holt is Mayor.

S. C., Greer.—\$10,000 electric-light, \$10,000 sewer and \$5000 water-works 5 per cent. 20-year bonds have been purchased at par by R. M. Marshall & Bros., Charleston.

S. C., Hickory Grove.—Election is to be held Jan. 31 to vote on school bonds. Address Board of Education.

S. C., Spartanburg.—\$5000 bonds Mayo School Dist. No. 83, Spartanburg county, are voted; H. T. Cash, F. H. Hardin and M. S. Stone, Trustees.

Tenn., Benton.—Bids will be received until noon Feb. 19 by W. S. Lawson, Chrmn. Polk County Court, for \$25,000 5½ per cent. school bonds.

Tenn., Bristol.—\$60,000 5 per cent. 20-year \$500 denomination high-school building bonds, dated Feb. 1, 1916, have been purchased at \$62,130 by Field, Richards & Co., Cincinnati. O. W. H. Lynn is Commr. Assets and Finance.

Tenn., Copperhill.—\$20,000 water-works and sewer bonds are voted. Address The Mayor.

Tenn., Jasper.—\$100,000 5 per cent. 18-year Marion county road bonds have been purchased at \$7740 premium and accrued interest by N. W. Halsey & Co., Chicago.

Tenn., Maynardville.—\$100,000 5 per cent. \$1000 denomination Union county road and bridge bonds, maturing \$6000 every 5 years, were purchased at par by Frank Maloney, Knoxville, Tenn. It was recently reported that bonds had been purchased by a Chicago banking firm. Geo. N. Taylor is Chrmn. County Commrs.

Tenn., Rutledge.—Bids will be received until noon Feb. 16 by W. G. Corum, Secy. Grainger County Road Commission, for \$30,000 5 per cent. 10-30-year Grainger County road bonds, dated Feb. 1, 1916. Denomination \$1000.

Tex., Alice.—Election is to be held Feb. 5 to vote on \$6000 water-works bonds. Address The Mayor.

Tex., Austin.—Attorney-General has approved the following securities: \$146,000 5 per cent. bonds Victoria County Drainage Dist. No. 3.

Tex., Bartlett.—\$24,000 paving bonds are denomination water and sewer bonds. K. S. 20 to vote on \$18,000 6 per cent. 20-year \$1000 voted. Address The Mayor.

Tex., Bastrop.—\$2500 High Grove Dist. and \$2500 Alum Creek School Dist., Bastrop county, bonds are voted. Address County Commissioners.

Tex., Belton.—Feb. 19 election is to be held in Salado precinct, Bell county, to vote on \$8000 road bonds. Address County Commrs.

Tex., Belton.—\$10,000 school, water and sewer bonds, recently voted, have been sold to San Antonio parties. Address The Mayor.

Tex., Brackettville.—Bids are being received by Commrs.' Court Kinney County for \$80,000 Kinney County Spofford-Brackett Highway bonds.



Tex., Dallas.—\$250,000 4½ per cent. 1-40-year city bonds were purchased jointly at \$9425 premium by Wm. Salomon & Co., New York, and Roy T. H. Barnes & Co., Hartford, Conn. M. B. Shannon is Commr. Finance and Revenue.

Tex., Eastland.—\$8000 6 per cent. 10-40-year street and bridge improvement bonds recently voted are reported sold. Address The Mayor.

Tex., Elm Mott.—Election is to be held Feb. 5 to vote on \$8000 school-building bonds. Address Board of Education.

Tex., Fort Stockton.—\$50,000 bonds School Dist. No. 1 are voted. Address Board of Education.

Tex., Fort Worth.—\$500,000 water-works bonds defeated.

Tex., Galveston.—Election Jan. 15 was not an election to issue bonds, but for the purpose of amending charter so as to authorize Board of Commrs. to submit to voters questions as to whether or not certain bonds should be issued. In about 30 days election will be held to determine whether bonds shall be issued. Lewis Fisher is Mayor.

Tex., Gatesville.—\$22,500 5 per cent. sewer bonds are reported sold at par, accrued interest and a premium. T. R. Mears is Mayor.

Tex., Grand Saline.—Bids will be received at any time by J. E. Andrews, City Secy., for \$18,000 5 per cent. 10-40-year street-improvement bonds.

Tex., Lockhart.—\$50,000 bonds Road Dist. No. 3, Caldwell county, are voted. Address County Commrs.

Tex., Marshall.—\$60,000 school-improvement bonds are voted. Address Board of Education.

Tex., Orange.—\$325,000 of municipal improvement bonds have been purchased at par, accrued interest and \$1200 premium by a Chicago firm. Address The Mayor.

Tex., Paris.—\$50,000 street and \$25,000 school 5 per cent. bonds have been purchased by E. H. Rollins & Sons, Chicago, at par, accrued interest, legal opinion and \$1642.50 premium. Ed. H. McCuiston is Mayor.

Tex., Port Arthur.—\$225,000 5 per cent. 20-year drainage, abattoir and pleasure pier bonds have been purchased at \$5625 premium by Wm. R. Compton & Co., St. Louis.

Tex., Taylor.—Election is to be held Feb. 15 to vote on \$50,000 5 per cent. \$1000 denomination serial bonds. Address Peter Schramm. A. V. Hyde is City Clerk. (Recently noted.)

Tex., Tyler.—\$100,000 Smith county road bonds are voted. Address County Commrs.

Tex., Wichita Falls.—\$225,000 5 per cent. 40-year denomination Wichita county courthouse bonds are voted; date for opening bids not yet decided. J. P. Jackson is Commr. Precinct No. 1, Wichita county.

Va., Christianburg.—Bids will be received until noon Feb. 29 by Geo. W. Wilson, Clerk Board of Supvrs. Montgomery County, for \$35,000 20-30-year road-improvement bonds.

Va., Narrows.—Election is to be held Apl. French is Mayor.

Va., Portsmouth.—Petition is to be filed with Board Supvrs. Norfolk County asking

that an election be called to vote on \$15,000 bonds for school at Pinners Point.

### FINANCIAL NOTES

The Interstate Trust & Banking Co. of New Orleans has elected two ladies as members of its board of directors. One of them is Mrs. John Dibert and the other Mrs. Samuel B. Sneath, and both, according to a report from there, are widows and their husbands were successful financiers of that city. Both are, of course, shareholders in the trust company, and it is stated have displayed much discretion in handling the large estates in their care.

The Fidelity Association of Wheeling has issued a folder presenting a statement of last year's business. There has been a marked growth in the bond department, a branch of which was lately established at Parkersburg, W. Va., with Fred M. King in charge.

N. A. McMillan has been elected chairman of the board of directors of the St. Louis Union Trust Co. to succeed Thos. H. West, who resigned on account of ill-health, and John F. Shepley has been elected president to fill the vacancy caused by the advancement of Mr. McMillan.

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All bids must be sealed, plainly addressed to the "State Board of Control, Charleston, W. Va.," and marked in a conspicuous place on the envelope, "Bid on Industrial School Building." The bid must be accompanied by a certified check for Five Hundred Dollars (\$500). Checks of unsuccessful bidders will be returned when contract is awarded, and check of successful bidder will be held until proper contract and bond have been executed, upon failure of bidder to execute which his check will be retained by the State Board of Control to cover the expense of re-advertising and reletting.

Immediately after contract is awarded the successful bidder will be required to execute a proper contract with guaranty company bond in a penalty equal to half the amount of the contract price, said bond to be conditioned for the construction and completion of the work as set forth in the plans and specifications, free of all claims for material and labor.

All bids must be made on forms filed with the specifications. The State Board of Control reserves the right to reject any and all bids.

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ROBT. P. PELL, Litt. D., President

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[Continued from Page 65.]

tically in solid molds, insuring even quality and absence of side seams or gates.

### 1916 Calendars.

Further distributions of 1916 calendars are being made by the Pomona Terra-Cotta Co., Pomona, N. C., diary calendar, with one week to each page, illustrating the different products of the company; Lehigh Portland Cement Co., Allentown, Pa., very large wall calendar with monthly calendar pad; International Typesetting Co., Brooklyn, N. Y., wall calendar with monthly pad, two order blanks between each calendar sheet and addressed envelopes inserted above; Hammond Iron Works, Warren, Pa., colored wall calendar, monthly pad; Goldschmidt Thermit Co., 90 West St., New York City, 5-colored map of United States, showing time belts, views of Thermit-weld, with monthly calendar pad.

Economic Aspects of the War. By Edwin J. Clapp, Professor of Economics, New York University. Published by Yale University Press, New Haven, Conn., and New York City. Cloth-bound, 360 pp. Price \$1.50 net.

In the words of the author, "This story of international lawlessness in the first

year of the great war is the outgrowth of a public lecture given at New York University in March, 1915. The book was written because, it seemed to me, that we Americans were paying too much attention to the affairs of belligerents and too little to our own.

"After all, we are by no means untouched by the war. It imperils not only our present material interests, but also neutral rights upon which the material interests of all peaceful nations in the future depend.

"The neutral world is watching for us to realize and assert its rights and ours. Hence this statement of what those rights are and this record of what seems to have occurred to threaten them."

### Ice Machines For Sale

Two 5-ton Columbus Absorption Ice Machines, now operating, in good condition. One machine can be delivered at once; other later. Installing larger machine.

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## RECEIVER'S SALE

Public Sale of Valuable Manufacturing Plant, Machinery, Tools and Equipment, Situate in Hagerstown, Maryland

Pursuant to an order and decree passed by the Circuit Court for Washington County, sitting in Equity, on the 4th day of January, 1916, in Cause No. 7871 on the Equity Docket of said Court, wherein George B. Oswald, Jr., et al. are plaintiffs, and The Hagerstown Combination Heater Company, a corporation, is defendant, the undersigned Receivers will offer at public sale in front of the Courthouse in Hagerstown, Maryland, on Tuesday, February 22, 1916, between the hours of one and three o'clock P. M., all of the real and personal property of The Hagerstown Combination Heater Company, consisting of a large and modern factory building, desirably located with reference to railroad facilities, machinery, tools, office equipment, manufactured furnaces and supplies, as follows:

The real estate consists of 1.034 acres of land, situate on North Prospect street, in Hagerstown, Maryland. The said parcel of land fronts about 300 feet on North Prospect street and extends back with a depth of about 150 feet on the north and about 175 feet on the south to the property of the Cumberland Valley Railroad Company.

The improvements on said land consist of a MAIN FACTORY BUILDING, practically new and of substantial brick construction, fronting 180 feet on North Prospect street with a depth of 50 feet, and includes an ell fronting 50 feet on Prospect street and extending west 100 feet to the Cumberland Valley Railroad siding. The Foundry, 50x100 feet, is located in the south end of the main building and has a two-story 20x32 cupola annex on west side, to which is joined a 7x9 elevator shaft. A 50-foot-wide grinding and assembling room is separated from the foundry by a brick partition and extends 30 feet north to the stockroom. The stockroom fronts 50 feet on Prospect street with a depth of 100 feet to a loading platform 43x10 feet facing the railroad siding. The main building also accommodates a storeroom 15x15x15 feet and an office room 15x20 feet. The whole structure is covered with sing roofing, and a 6½-foot cellar extends full depth and width of stock and assembling rooms. A pattern-room 18x36 feet adjoins the south end of main building, with entry to foundry, and a coke shed 11x51 feet is conveniently located paralleling railroad siding. These improvements are modern, in first-class condition, and substantially constructed.

The Foundry equipment to be sold separate from the real estate comprises: 1 20 H. P. Fairbanks-Morse Motor. 1 3 H. P. Fairbanks-Morse Motor. 1 Barry & Zecher Cupola, 45" shell, 35' stack, with No. 10 Buffalo Blower. 1 Tumbler, with extra set parts. 1 Otis Hand Elevator, No. 4, 2000 lbs. capacity. 1 Foundry Crane. 1 Buffalo Forge, No. 650. 1 Anvil. 1 Osgood Platform Scales, 1000 lbs. capacity. 1 Osgood Portable Scales, 1500 lbs. capacity. Patterns and flasks for the manufacture of the Home Furnace (8 sizes) and for the manufacture of the Pen-Mar Furnace (2 sizes). Patterns and flasks for the manufacture of lamp posts designed for the use of city streets.

Lot of miscellaneous small patterns, flasks, core boxes and equipment incidental to the foundry business; about 25 tons of moulding sand, and about 20 tons of scrap iron.

The machine and assembling room equipment consists of 1 5 H. P. Fairbanks-Morse Motor; 1 No. 6 Sterling Emery Grinder; 1 16" Challenge Emery Grinder; 1 14" Challenge Emery Grinder; 1 Bench Tool Grinder; 1 110-volt 60-cycle 1-phase Portable Grinder (made by the U. S. Electrical Tool Co.); 1 20" Power Drill (made by Rockford Drill & Machine Co.); 1 10" Rockford Power Drill; 1 Horizontal Drill; 2 Machinist's Vises; miscellaneous small tools and equipment.

The pattern-making machinery includes 1 Crescent 18" Jointer; 1 36" Crescent Band Saw; shafting, pulleys, belting, etc.

The manufactured products and stock comprises: 30 No. 22-40 Pen-Mar Furnaces (set up and in stock). 18 No. 22-44 Pen-Mar Furnaces (set up and in stock). 18 Farm Furnaces.

Lot of old Home Furnaces and parts in various sizes. The office equipment, all in good condition, consists of 1 desk, 4 chairs, 1 Monarch typewriter and 1 drafting table.

The real estate, consisting of the land and all improvements thereon, will be sold as one parcel; the personal property, as above listed, consisting of machinery, tools, equipment, products (manufactured and raw), will be offered separately.

This sale offers an opportunity to engage in the manufacturing business and to acquire a complete plant therefor, advantageously situated in a growing city of 25,000 inhabitants. Its proximity to all the large Eastern cities, the exceptional railroad advantages of the Baltimore & Ohio, Pennsylvania, Western Maryland and Norfolk & Western systems offer to the manufacturer opportunities not to be duplicated in any other industrial city of its size.

The terms of sale as prescribed by the Court are: In the case of the real estate, one-half of the purchase money cash on the day of sale, or the ratification thereof by the Court, and the balance in one year from the day of sale, with interest thereon from the day of sale, the deferred payment to be secured with security approved by the Receivers, or all cash, at the option of the purchaser.

In the case of the personal property, the terms of sale are cash on the day of sale, or within five days thereafter, and no goods to be removed until settled for.

I. S. KAHN.

I. M. WERTZ.

Receivers of the Hagerstown Combination Heater Co.

SCOTT M. WOLFINGER.

Attorney for Receivers.



## MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

### Improved Car Unloader Chute.

What is claimed by its manufacturers, the Heltzel Steel Form & Iron Works, Warren, O., to be an improvement on the ordinary car unloader chute and to be a great saver of time in transferring bulk material, such as sand or gravel, from open freight car to wagon or truck, has been put on the market under the name of the Heltzel Lightning car unloader chute. An accompanying illustration gives a good idea of the apparatus, which is constructed of steel with the exception of the trunion seat of malleable iron. The pan is designed to retain a maximum load without spilling. A clear open end faces the shovelers, the pan slightly turned up to prevent the material from sifting back into the car. The top of the chute is reinforced by means of double angle bends, which afford a ready hand hold. Two arms support the chute and a "Safety First" hanger securely grips the side of the car. No locking device

carry vertical corrugations cut across by diagonal depressions to facilitate the flow of the electrolyte into the cell and the release of the gases from it. At the top and bottom of each electrode are two openings communicating by a cored channel with opposite sides of the plates. Those at the bottom are for the water intake and those at the top are for the gas offtake. The cells between the electrodes are filled with the electrolyte, caustic potash or soda, a solution found by experiment to utilize the current to the best advantage, and which acts as a conductor.

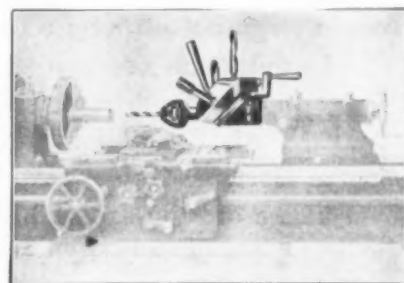
The frame construction is of extreme rigidity, said to be proof against any distortion and consequent disarrangement of the electrodes with resultant leakage. At each end of the steel rods or bars supporting the electrodes there is a heavy pedestal of a height to give the machine a convenient elevation. There is no middle support, as is sometimes found, a feature claimed to simplify the problem of erection and alignment. The apparatus is thoroughly insulated throughout to prevent any diversion of current.

The water feed is kept balanced for the two sides and at a uniform pressure by a hydrostatic head in the solution tank, thus obviating mixing of gases due to circulation of fluids between electrodes caused by uneven pressure, and excessive corrosion from the same

gases. Gauge levels show the fluid in the body of the apparatus. The manufacturer states that oxygen produced with this machine is 99.6 per cent. pure or better, and hydrogen 99.8 per cent. or better, four feet of oxygen and eight of hydrogen being extracted per K. W. H. The machine is said to operate with minimum attendance for a high-duty device.

### Lathe-Aiding Device.

Newman's multiple rotary chuck, a lathe attachment recently developed by the Newman Manufacturing Co. of Cincinnati, O., is claimed to convert an ordinary lathe into a turret lathe, enabling it to turn out the same class of work that is produced on the best ma-



NEWMAN MULTIPLE ROTARY CHUCK.

chines of the latter type. The tool is 7 inches in diameter, weighs 27 pounds and provides attachment for four different tools with wrench. It is attached to the outer spindle of the tailstock on the ordinary lathe, but a few seconds being required for the operation. The manufacturer claims that with this multiple device in place it is possible to drill holes up to 1½ inches in diameter, top counter, bore, ream, tap, etc., without stopping to change tools, and that thus the cost of production can be reduced materially in shops where ordinary lathes are now used. The accompanying illustration shows device attached to machine ready for use.

### Earliest Coal Mining in Alabama.

The earliest known record of the existence of coal in Alabama was made in 1834, but the first statement of production in the State is contained in the United States census report for 1840, in which the amount mined is given as 946 tons. The mines of Alabama were probably worked to a considerable extent during the Civil War, but there are no specific records until 1870, for which the United States census reports a production of 11,000 tons. The development of the present great industry really began in 1881 and 1882, when attention was directed to the large iron deposits near the city of Birmingham. By 1885 the coal production of the State had increased to nearly 2,500,000 tons. In 1914, according to the United States Geological Survey, the production was 15,593,422 tons.

### \$1,000,000 Bonds for Enlargements.

An issue of bonds to the amount of \$1,000,000 has been arranged by the Louisville (Ky.) Gas & Electric Co. to enlarge its main power plant. This station is generating 20,000 kilowatts, and demands are approaching its capacity, so that the management will install an additional new unit of 15,000 kilowatts capacity. There will be constructed an additional building, a 600-foot long by 36-inch diameter parallel cooling tunnel and a smokestack 250 feet high by 12 feet in diameter.

### Courthouse Furniture and Fixtures.

The attention of furniture and fixture manufacturers is invited to a letter received by the MANUFACTURERS RECORD from W. L. Stevens, who writes as follows:

"W. L. Stevens, architect, 312 Whitney-Central Building, New Orleans, La., desires to communicate with courthouse fixture and furniture specialists with reference to courthouse furniture to be placed in two new courthouses under construction."



HELTZEL LIGHTNING CAR UNLOADER CHUTE.

is necessary to hold the chute in position during loading, as the center of gravity is so placed that a 20-pound lift is required to tilt the loaded chute. A clean dump is made by tilting, after which the chute rights itself by gravity. No bars or shafts pass through the pan to cause interference with the material. Cast steel trunions are riveted to the sides of the chute and fit into the trunion seats on elevator arms. Light weight throughout, without a sacrifice of strength, was held in view in designing and constructing the chute. It is shipped complete in three parts, and is claimed unequalled for ease of moving and putting in place on the side of car, this made possible by the separation of pan from elevator arms, said to be an exclusive feature.

### Oxygen and Hydrogen Generator of Improved Design.

For a number of years the International Oxygen Co. of New York, manufacturer of oxygen and hydrogen generating apparatus, has sold a machine now in successful operation in numerous plants throughout the country. The company has just developed a machine evolved from the Moritz type, which it claims to be an advance over former models. The new machine, the I. O. C. Bipolar generator, consists of a series of metallic plates (electrodes) clamped together by means of a screw working in the rear support, the electrodes electrically insulated from one another and separated by diaphragms of porous fabric. Each pair of electrodes forms a closed cell, divided by the diaphragm. The electrodes are of a special design covered by a patent of the company, the anode side being heavily nicked and the cathode side made of commercially pure iron, which combination of metals is used to facilitate the electrolysis and prevent the formation of rust and oxides. The surfaces of the electrodes

cause. The solution is automatically replenished from a supply tank as gases are released and withdrawn. The gas offtake is balanced with the water feed by the same means. The gases, upon release, are washed to free them of electrolytic impurities.

An electric current admitted at one end plate passes on through the plates and the solution, in its passage



I. O. C. BIPOLAR OXYGEN AND HYDROGEN GENERATOR.

decomposing the water into the two gases, which are released on opposite sides of each plate and emerge upward into the gas offtakes. A signal whistle is provided to give notice when the level of the solution in the generator falls below the prescribed limit. Glass sight-feed indicators on the solution tank and domes show the fluid levels and reveal the generation of the

# Where to Spend the Winter

How to Get There and Where to Stay When You Do Get There

**M**ANY a life would be lengthened, many a sickness would be lessened, many an invalid would regain health and strength and many men and women, even if in the enjoyment of the fullest health, would find their days still more full of joy if everyone who can would learn to spend a portion of every winter in the health-giving climate of the South.

The biting cold and blizzards and snows of the North and West put a tax on the vitality of every one, though not all fully realize how great is the burden of this exhausting strain on their systems.

In the South one may find, during the winter and spring season, every variety of climate that can be desired by the heart of man.

There is the glorious mountain section, with its strong and invigorating air, with less of cold than in the North and the West, preferred by some to a more summery climate.

There are the sand hill regions of the Carolinas and Georgia, warmer than the mountains, and for many people warm enough, and the San Antonio region of Texas for a generation a favorite resort for many.

And then there are, for those who want to find through the long winter what the poet writes of as the perfect day in June, Florida and the Gulf Coast all the way down to Texas.

In these various regions are to be found opportunities for health and recreation unsurpassed elsewhere on earth so far as man knows.

The Manufacturers Record believes that it is doing a work of national importance when it urges its readers throughout the North and West to arrange to spend at least a portion of every winter in the South.

New strength and larger vitality would be given to millions if they would make such a change and by escaping the biting blasts of winter at home breathe the balmy air of the health and pleasure regions of the South.

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